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Environmental
assessment: Grizzly
Gulch Game Farm

ENVIRONMENTAL ASSESSMENT

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GRIZZLY GULCH GAME FARM

Montana Department of
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ENVIRONMENTAL ASSESSMENT

GRIZZLY GULCH GAME FARM

Montana Department of
Fish, Wildlife & Parks
December 15, 1992

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EA Checklist For Game Farm License Applications

PART I. GAME FARM LICENSE APPLICATION

The department's authority to regulate game farms is contained in sections 87-4-406 through 87-4-424, MCA and ARM 12.6.1501 through 12.6.1519 (Appendix A).

1. Name of Project: **Grizzly Gulch Game Farm (Jerry Christison, applicant).**

2. Name, Address and Phone Number of Applicant: Mr. Jerry Christison, 6491 North Montana Ave., Helena, Montana 59601. (406) 458-6440

3. If Applicable:

Estimated Construction/Commencement Date: Applicant has a buy/sell agreement to purchase the property (120 acres) 55 of which are proposed to be utilized for a compound to keep and raise elk, whitetail and mule deer. Game farm applications must be processed by FWP within sixty days of receiving a completed application. The completed application was received on November 2, 1992. The notification date to the applicant is January 2, 1993, with commencement by the applicant following licensing.

Estimated Completion Date: Unknown at this time. The business plan that accompanied the game farm application stated that it would take four years to build the elk herd up to 20 cows after culling and selling the bull calves. Applicant has expressed the desire to complete the physical site and prepare it for stocking as soon as possible following licensing, however, a completion date has not been specified.

Is this an application for expansion of existing facility or is a future expansion contemplated? This is not an expansion of an existing facility. It is not anticipated that the Game farm would be expanded beyond the 120 acre complex.

4. Location Affected by Proposed Action (county, range and township) Lewis and Clark County Range 4 W, T 10 N, Sec 34 & 35. See Appendix B for detailed legal description.

5. Project Size: Estimate the number of acres that would be directly affected that are currently:

(a) Developed:
residential... approx. 4 acres
industrial.... -0- acres

(b) Open Space/Woodlands/
Areas.......... 116 acres
1 single family dwelling

(c) Wetlands/Riparian
Areas.......... -0- acres

(d) Floodplain... -0- acres

(e) Productive:
irrigated cropland... -0- acres
dry cropland......... -0- acres
forestry............. -0- acres
rangeland........... -0- acres

other............... ____ acres

6. Map/site plan: See Appendix B.

7. Narrative Summary of the Proposed Action or Project including the Benefits and Purpose of the Proposed Action.

Mr. Jerry Christison, currently of 6491 North Montana Ave., Helena, Mt. proposes to build a game farm facility approximately two miles south of Helena in the Grizzly Gulch drainage. He has applied for a game farm license and shooting preserve permit ARMh the Montana Department of Fish, Wildlife, and Parks.

Mr. Christison currently does not own the proposed site but has a buy/sell agreement for 120 acres of which 55 acres would be fenced for use to pasture elk and, eventually, white tail and mule deer. Mr. Christison proposes to fence the area in stages. His plan is to fence 4 acres (see Appendix B) for the elk that he presently owns. He would then build a quarantine area (see Appendix B) and fence an additional 4 acres (Appendix B). He proposed to use portable handling facilities until he can build a permanent handling facility within the compound in the interim. He would contract with another elk rancher for a quarantine facility until he could build one on his property. Mr. Christison has not specified in his application how long this phase-in project would take.

In addition to using the 55 acres for a game farm, some property (lot size/acreage not described) for a family home, and 20 acres for a ranch manager's homesite is proposed.

Mr. Christison proposes to initiate the operation with a herd of up to nine elk, which includes one registered pure blood bull and four cows, which he presently owns. He has since applying for the Game Farm license, sold two bull calves for start up investment capital. He is going to expand his existing herd to 20 calves over a four year period. He has stated that he will not purchase additional game farm animals to increase his herd.

The Montana Department of Fish, Wildlife, and Parks under 87-4-408, MCA, has primary jurisdiction over the licensing of game farms (Appendix A). Section 87-4-409(3) specifies that Fish, Wildlife, and Parks has 60 days to notify the applicant of its decision to approve or deny the application. FWP also is responsible for issuing shooting permits under statute MCA 87-4-501. The department is also required, under the Montana Environmental Policy Act, to initiate an environmental review process for any State action that may have any significant impact on the human environment as a result of the proposed action. Since FWP is the licensing authority for game farms and such entities have potential impacts upon the environment, FWP must therefore comply with the Montana Environmental Policy Act (MEPA) in the licensing process, as well as the Game Farm Statutes. The statutory sixty-day time period does not provide adequate time for the preparation of an EIS; therefore this environmental assessment was prepared pursuant to ARM 12.2.430(3)(c).

On December 4, 1992, Mr. Christison stated he has applied for a shooting preserve permit in order to have the ability to kill an animal using a paying client. He is proposing to move the animal to another game farm for a commercial shoot.

8. Listing of any other Local, State or Federal agency that has overlapping or additional jurisdiction.

(a) Permits:

Agency Name: U.S. Forest Service	Permit	Date Filed/#

Access to property either through an easement or special use permit. The applicant is currently working on attaining legal access to the property, but has not submitted an application to the USFS.

(b) Funding:

Agency Name	Funding Amount
N/A	

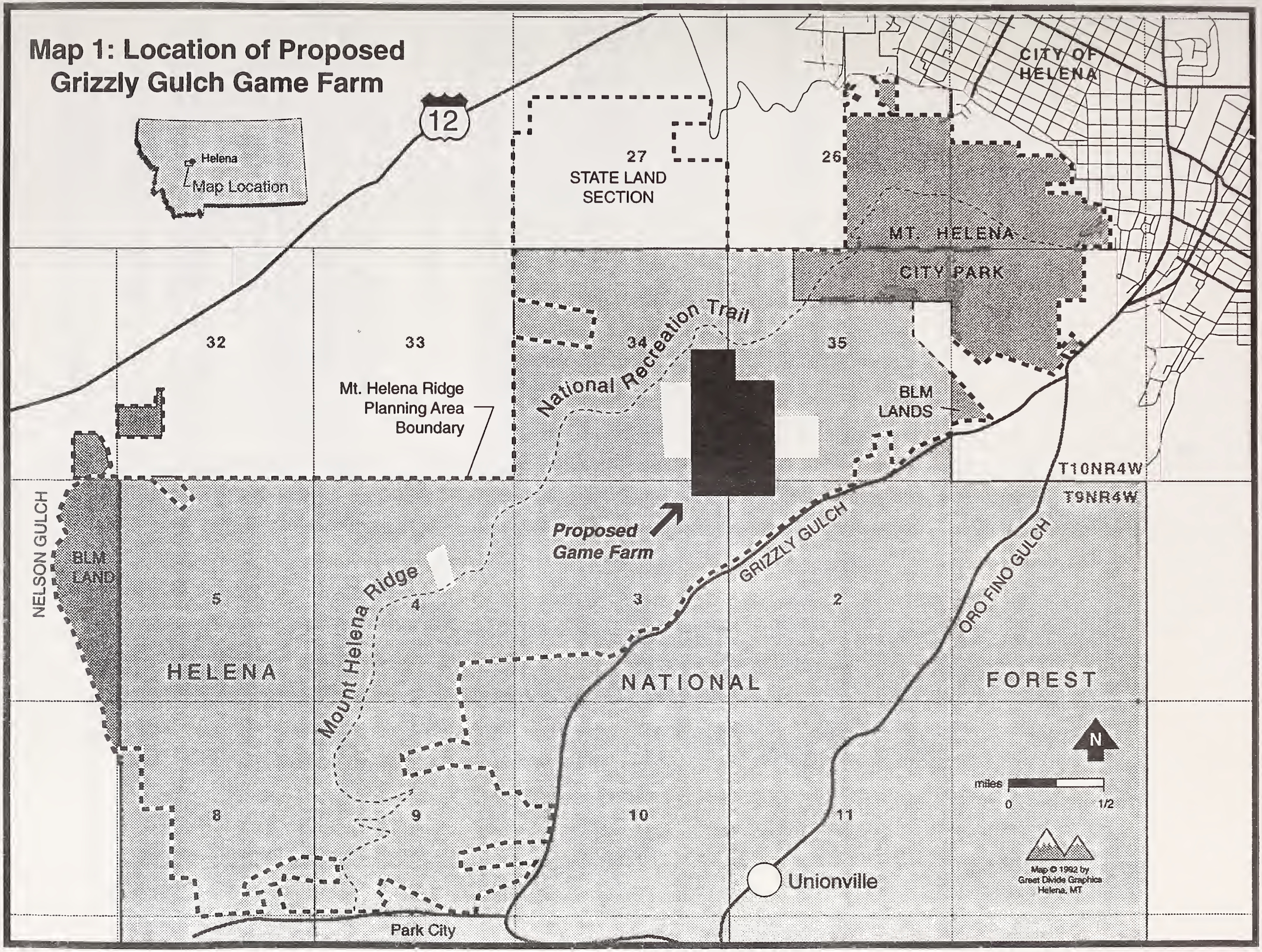
(c) Other Overlapping or Additional Jurisdictional Responsibilities:

Agency Name	Type of Responsibility
State Historic Preservation Office	Identifying, documenting and preserving cultural resources in Montana
Lewis & Clark County Weed Board	Control of noxious weeds in L & C County
Department of Health and Environmental Sciences	Air, water quality, human disease
Water Quality Bureau	Issues on water quality
Montana Department of Livestock	Authority over game farm animals
Environmental Quality Council	Montana Envrionmental Policy Act compliance
Montana Department of Natural Resources	Conservation Districts

9. List of Agencies Consulted During Preparation of the EA:

- Montana Department of Fish, Wildlife, & Parks,
  - Wildlife Division
  - Legal Division
  - Law Enforcement Division
- Helena National Forest
- Environmental Quality Council
- Lewis and Clark County Land Use Department
- Montana Historical Society/SHPO
- Department of Health and Environmental Sciences
  - Water Quality Bureau
- Department of State Lands (DSL)
- U.S. Soil Conservation Service (SCS)
- Montana State Library

Map 1: Location of Proposed Grizzly Gulch Game Farm



PART II. ENVIRONMENTAL REVIEW

A. Evaluation of the Impacts of the Proposed Action Including Secondary and Cumulative Impacts on the Physical and Human Environment:

IMPACTS

PHYSICAL ENVIRONMENT	UNKNOWN*	NO IMPACTS	MINOR IMPACTS:*	POTENTIALLY SIGNIFICANT IMPACTS:*	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
1. LAND RESOURCES						
Will the proposed action result in:						
a. Soil instability or changes in geologic substructure?	X					*
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil which would reduce productivity or fertility?				X	Unknown	*
c. Destruction, covering or modification of any unique geologic or physical features?	X					*
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?	X					*
e. Other:___________						

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

a. Soil instability or changes in geologic substructure?

Proposed Action: Unknown. Because the facility entails a fenced compound "feed lot" area, there is the potential for ground compaction and vegetative destruction, leading to topsoil loss and erosion. Overgrazing on slopes will cause erosion by both wind and water which will ultimately remove topsoil.

No Action Alternative: No impact.

b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil which would reduce productivity or fertility?

Proposed Action: Potentially significant because the facility entails a fenced compound "feed lot" area, there is the potential for ground compaction and vegetation destruction, leading to topsoil loss and erosion. Compaction will occur especially along the interior fence lines. There are two different types of soils at the proposed Game Farm site: the Windham soil series and the Roto soil series. Both types of soils are loam soils that have average erosion properties. However, if the ground cover is reduced (denuded), the erosional properties would increase because the slope is at least 25%. This could result in potentially significant impacts.

No Action Alternative: No impact.

c. Destruction, covering or modification of any unique geologic or physical features?

Proposed Action: Unknown. Impacts are unknown because there has been no thorough geological analysis undertaken or completed for the area.

No Action Alternative: No impact.

d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?

Proposed Action: Due to the 60 day time constraint, information on hydrology or stream attributes for the area were not researched.

No Action Alternative: No impact.

IMPACTS

PHYSICAL ENVIRONMENT (Continued)	UNKNOWN*	NO IMPACTS	MINOR IMPACTS:*	POTENTIALLY SIGNIFICANT IMPACTS:*	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
2. AIR Will the proposed action result in:						
a. Emission of air pollutants or deterioration of ambient air quality?				X	Unknown	*
b. Creation of objectionable odors?	X					*
c. Other:______________						

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Air Resources (Attach additional pages of narrative if needed):

a. Emission of air pollutants or deterioration of ambient air quality?

Proposed Action: Potentially Significant. If the site becomes over-grazed as a result of livestock concentration, there is the potential for wind erosion, which could result in topsoil loss. This topsoil loss has the potential of increasing particulate matter (dust), which could result in a deterioration of ambient air quality.

No Action Alternative: No impact.

b. Creation of objectionable odors?

Proposed Action: Unknown. Objectionable odors is subjective as it relates to agriculture practices. What might be offensive to some may be pleasant to others. Odors are contingent upon the numbers of animals kept in confinement and the size of the confined area. Variables such as weather and wind conditions will influence odors. Mitigation measures would include regular removal of fecal materials and timely clean-up of remnants from other game farm related activities. (slaughtering, calving, etc).

No Action Alternative: No impact.

IMPACTS

PHYSICAL ENVIRONMENT (Continued)	UNKNOWN*	NO IMPACTS	MINOR IMPACTS:*	POTENTIALLY SIGNIFICANT IMPACTS:*	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
3. WATER						
Will the proposed action result in:						
a. Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen, turbidity or pathogens?				X	Unknown	*
b. Changes in drainage patterns or the rate and amount of surface runoff?	X					
c. Alteration of the course or magnitude of flood water or other flows?	X					*
d. Changes in the amount of surface water in any water body or creation of a new water body?	X					*
e. Exposure of people or property to water related hazards such as flooding?	X					*

IMPACTS

PHYSICAL ENVIRONMENT (Continued)	UNKNOWN*	NO IMPACTS*	MINOR IMPACTS*	POTENTIALLY SIGNIFICANT IMPACTS*	CAN IMPACTS BE MITIGATED?*	COMMENT INDEX
3. WATER (Cont'd)						
Will the proposed action result in: (Cont'd)						
f. Changes in the quality of groundwater?	X					*
g. Changes in the quantity of groundwater?	X					*
h. Increase in the risk of contamination of surface or groundwater?	X					*
i. Violation of the Montana Non Degradation Statute?	X					*
j. Effects on any existing water right or reservation?	X					*
k. Effects on other water users as a result of any alteration in surface or groundwater quality?	X					
l. Effects on other users as a result of any alteration in surface or groundwater quantity?	X					
m. Other:__________						

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Air Resources (Attach additional pages of narrative if needed):

a. Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen, turbidity or pathogens?

Proposed Action: Potentially significant. Concentration of game farm animals could provide a significant source of pathogens discharged by surface water mingling with fecal material.

Alternative Action: Collect, bag, and transport fecal material and waste feed to a county approved disposal site, commensurate with the number of animals on site. Control of other effluents from the site may involve drainage design and construction.

No Action Alternative: No impact.

b. Changes in drainage patterns or the rate and amount of surface runoff?

Proposed Action: Unknown.

No Action Alternative: No impact.

c. Alteration of the course or magnitude of flood water or other flows?

Proposed Action: Unknown. Flows in this area are highly dependent upon snow levels, and spring precipitation. Unusually heavy amounts of snow or rain coupled with changes in topography caused by the proposed facility, could result in alteration of flows and magnitude.

No Action Alternative:

d. Changes in the amount of surface water in any water body or creation of a new water body?
Proposed Action: Unknown. This element is entirely dependent upon surface condition caused by 55 acre "feed lot".

No Action Alternative:

e. Exposure of people or property to water related hazards such as flooding?
Proposed Action: Unknown. Again, annual precipitation levels combined with alteration of surface could increase run-off below the site.

No Action Alternative: No Impact.

f. Changes in the quality of groundwater?

Proposed Action: Unknown. The current well for serving residences on the property is approximately 650' [personal conversation with Jerry Christison, December 4, 1992] in depth. However, ground water sources closer to the surface would be affected by chemicals such as insecticides used to control flies on elk. An adjacent residence occurs immediately downslope of the pens. There was not sufficient time allowed in the licensing process to adequately investigate this impact.

No Action Alternative: No impact.

g. Changes in the quantity of groundwater?

Proposed Action: Unknown, but generally speaking, unless extreme changes are made on the surface or slope area, it is unlikely that quantity would be affected by this operation.

No Action Alternative: No impact.

h. Increase in the risk of contamination of surface or groundwater?

Proposed Action: Unknown. Surface water could be contaminated by farm animal feces if left in concentration on the site. Groundwater sources close to the surface could also be affected. There was not sufficient time allowed in the licensing process to adequately investigate this impact.

No Action Alternative: No Impact.

i. Violation of the Montana Non Degradation Statute? ✓

Proposed Action: Unknown. This facility would be considered a feed lot or animal confinement facility. Operators of such facility are required to retain wastes and by-products on their property. Grizzly Gulch is an intermittent drainage and therefore considered a state waterway. The applicant must therefore, meet the non-degradation statutes, Section 75-5-303, MCA, Claudia Massman, DHES).

Alternative Action: Collection of fecal material and disposal at appropriate site not utilized by wildlife or livestock. Birms and other physical barriers which confine fecal material to property and out of run-off channels. The applicant will operate under best management practices, and make every reasonable effort to contain non-point pollution on the facility and protect beneficial use.

No Action Alternative: No impact.

j. Effects on any existing water right or reservation?

Proposed Action: Unknown. Water rights which exist with the proposed site as well as adjacent to the area are unknown. Insufficient time within 60 day licensing period to explore and identify this issue.

No Action Alternative: No impact.

k. Effects on other water users as a result of any alteration in surface or groundwater quality?

Proposed Action: Unknown.

No Action Alternative: No impact.

l. Effects on other users as a result of any alteration in surface or groundwater quantity?

Proposed Action: Unknown.

No Action Alternative: No impact.

PHYSICAL ENVIRONMENT (Continued)	IMPACTS UNKNOWN*	NO IMPACTS	MINOR IMPACTS:*	POTENTIALLY SIGNIFICANT IMPACTS:*	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
4. VEGETATION Will the proposed action result in:						
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?				X	Unknown	*
b. Alteration of a plant community?				X	Unknown	*
c. Adverse effects on any unique, rare, threatened, or endangered plant species?	X					*
d. Reduction in acreage or productivity of any agricultural land?		X				*
e. Establishment or spread of noxious weeds?				X	Yes	*
f. Other:_________						

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Vegetation Resources (Attach additional pages of narrative if needed):

a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?

Proposed Action: Potentially significant. The extent and rapidity of changes in plant diversity, productivity and abundance will be related to the number of animals pastured on the premises. Pasturing of the initial 9 animals will impact only the small pasture that will be constructed initially. Expansion of the elk herd and addition of an unknown number of deer, combined with yearlong grazing/browsing intensity will reduce plant diversity, productivity and abundance within the area enclosed by the perimeter fence. If weed free hay is not used, feed could introduce weed seeds which could alter the vegetation of the area.

No Action Alternative: No impact.

b. Alteration of a plant community?

Proposed Action: Potentially significant. Norman Alm of Helena, Montana, currently holds a grazing permit for 40 AUM's on the adjacent Helena Forest land during a two month season. The degree of alteration of the existing plant community is dependent on stocking rates (assumed to reach at least 30 elk and an unknown number of deer) and grazing practices (assumed to be yearlong). Under these conditions, perennial plants -including grasses - would be expected to decline and annual forbs, including noxious weeds, would be expected to increase.

No Action Alternative: No impact.

c. Adverse effects on any unique, rare, threatened, or endangered plant species?

Proposed Action: Unknown. In the absence of a species inventory, it is not possible to evaluate this question. However,, the Natural Heritage program of the Montana State Library indicates that a species of Astragalus (pea family), classified as an S-2 Sensitive Species, occurs in the MT. Helena area, immediately adjacent to the proposed game farm. It is quite possible that this sensitive species occurs on or near the game farm site.

No Action Alternative: No impact.

d. Reduction in acreage or productivity of any agricultural land?

Proposed Action: No impact. It appears that the site proposed to be enclosed is not currently cultivated. With that assumption, one would assume no impacts. The area currently includes a fallow hayfield. The acreage will be reduced by at least 55 acres.

No Action Alternative: No impact.

e. Establishment or spread of noxious weeds?

Proposed Action: Potentially significant. Confinement of game farm animals (to eventually number at least 30 elk and an unknown number of deer within a 55 acre enclosure, combined with yearlong grazing will result in reduced vigor of desirable perennial plants, soil compaction, declining plant cover and soil erosion within the land area confined by the compound fence. These circumstances are considered to be highly conducive to establishment of noxious weeds.

Alternative Action: A noxious weed control program will be filed and followed.

No Action Alternative: No impact.

	POTENTIAL FOR OCCURRENCE					
PHYSICAL ENVIRONMENT (Continued)	UNKNOWN*	MINIMAL*	SIGNIFICANT MODERATE*	SIGNIFICANT HIGH*	CAN POTENTIAL BE REDUCED?*	COMMENT INDEX
5. FISH/WILDLIFE						
A. Based on design of the proposed game farm, and physical attributes and wildlife values of the site, what is the potential for any of the following to occur?						
a. Through-the-fence contact between game farm animals and wildlife (consider traditional seasonal habitat use and location of travel routes and migration corridors).				X	Unknown	*
b. Escape of game farm animals - consider site-specific factors that could reduce effectiveness of perimeter fences built to standards outlined in Rule 12.6.1503A (including steepness of terrain, winter snow depths/drifting, susceptibility of fences to flood damage, etc.).				X	Unknown	*
c. Ingress of wildlife - consider site-specific factors that could reduce effectiveness of perimeter fences (see b.) built to standards outlined in Rule 12.6.1503A, as well as circumstances that could attract wildlife to or into the game farm (traditional seasonal habitat use and location of travel routes and migration corridors).				X	Unknown	*
d. Deterioration of critical wildlife habitat (capability to produce or sustain wildlife populations).		X				*

POTENTIAL FOR OCCURRENCE

PHYSICAL ENVIRONMENT (Continued) 5. FISH/WILDLIFE (Cont'd)	UNKNOWN*	MINIMAL*	SIGNIFICANT MODERATE*	SIGNIFICANT HIGH*	CAN POTENTIAL BE REDUCED? *	COMMENT INDEX
e. Displacement of wildlife from critical habitat(s) as a result of proposed fences or other factors.				X	No	*
f. Creation of barriers to travel routes or seasonal migration corridors used by wildlife populations.		X			Unknown	*
g. Other conditions that may stress wildlife populations, affecting their diversity, abundance or distribution.			X		Unknown	*
h. Changes in the diversity, abundance or distribution of game populations (include redistribution of wildlife from habitats that would be rendered unsuitable or inaccessible because of fencing or other factors).				X	Unknown	*
i. Changes in the diversity, abundance or distribution of nongame populations (include redistribution of wildlife from habitats that would be rendered unsuitable or inaccessible because of fencing or other factors).	X					*
j. Adverse effects on any unique, rare, threatened or endangered species, or their habitats.		X				*
k. Introduction of any species not presently or historically occurring in the affected area.				X	Unknown	*

**Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.*

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Fish/Wildlife Resources (Attach additional pages of narrative if needed):

A. Based on design of the proposed game farm, and physical attributes and wildlife values of the site, what is the potential for any of the following to occur?

a. Through-the-fence contact between game farm animals and wildlife (consider traditional seasonal habitat use and location of travel routes and migration corridors).

Proposed Action High potential. Conventional game farm fencing consists of a woven-wire fence, 8 feet in height. This fencing style will not prevent contact between penned animals and native wildlife at this site. The Grizzly Gulch proposed game farm site is used yearlong by elk and mule deer, seasonally by moose, and is located in elk winter range. The Grizzly Gulch ridge is also heavily used by mule deer, but at the proposed game farm site, elk dominate.

Contact via nose-to-nose, nose-to-other body parts, and nose-to-soil and vegetation along the fence line, are all known methods of disease and parasite transmission (See 5B.a. - transmission of diseases or parasites). Contact will be most intense during breeding and calving season.

Alternative Action: Moderate potential. If fence design and manure disposal mitigation measures are implemented, through-the-fence contact potential would be reduced. However, the effectiveness of such fence design has not been applied elsewhere, therefore assurance of preventing through-the-fence contact has not been measured. Increased distance between interior and exterior fences would be the best safeguard against contact between animals and contaminated soil or vegetation.

No Action Alternative: If the game farm is not constructed (the No Action Alternative), there would be no potential for this situation to occur.

b. Escape of game farm animals - consider site-specific factors that could reduce effectiveness of perimeter fences built to standards outlined in Rule 12.6.1503A (including steepness of terrain, winter snow depth/drifting, susceptibility of fences to flood damage, etc).

Proposed Action High potential. The western boundary of the proposed fence runs perpendicular to terrain having a 25% (4:1) slope. Elk are capable of jumping up to and exceeding 7 feet in height, thus the requirement of 8 foot fences. When under extreme stress, an elk can get over/through any fence, and deer are more difficult to contain than elk. The 8 foot criteria was established for situations on level terrain. Fencing specifications to discourage elk from attempting to jump a fence, the height of which is effectively reduced due to steep terrain, are unknown. Portions of the fenced sidehill appear to have a slope of up to 30% (USGS 1:24,000 topographic quadrangle map).

Snow loading, floods, wildfire, earthquake hazards, fallen trees, soil slumps are all natural circumstances that can result in breaches of game farm fences, most of which have in fact been documented as causes of fence failures on game farms. The proposed site exists on the windward side of the Grizzly Gulch-Ten Mile Creek ridge which peaks at 5,200 feet. Snow accumulations, together with strong chinook winds that are common along the east slope of the Continental Divide, are known to create drifting conditions adequate to facilitate passage of game farm animals over fences. In addition, escape of animals has occurred with regularity as a result of inadequate fencing, poor fence maintenance, damage to fences from confined animals or wild animals, vehicle accidents, and gates left open (MDFWP, 1992).

Wooden fence posts are susceptible to wildfire. The site has a history of repeat fire occurrence, so the possibility of escapement exists if fence support structures are damaged. Whether the game farm animals would survive a fire incident severe enough to damage the fence, and thus escape, is unknown.

The proposed game farm site occurs in earthquake zone 3 which means, "a major earthquake may occur at any time". Only Yellowstone Park and the San Andreas fault have a higher rating (Paul Spengler, Lewis and Clark County Disaster and Emergency Services Coordinator, personal. conversation.). Relative to escapement of game farm animals, there is a potential, however wire fences usually withstand the shock of a quake. Buildings and retaining walls on the other hand, would be highly susceptible to damage.

Mass soil failure could result on the proposed site. Topography of the game farm site consists of an east facing sidehill on a moderate to severe slope. The sidehill has a subridge, or bulging toe-slope, across which the proposed game farm fence would occur. The precise soil composition of this toe-slope is unknown. In Soil Survey of the Helena Valley, Part of Lewis and Clark County Montana (USDA SCS, ca 1980) indicates that mass soil failure or slumping is more likely to occur on a severe slope. A "severe slope" is categorized in the 20 to 40% range. The proposed western fence line would occur on a slope of at least 25%. The stability of this slope both with and without the stress of earthquake potential is not known and should be addressed prior to establishment of the proposed game farm fence to prevent the possibility of fence failure and thus animal escapement.

No Action Alternative: No potential.

c. Ingress **of wildlife - consider site-specific factors that could reduce effectiveness of perimeter fences (see b.) built to standards outlined in Rule 12.6.1503A, as well as circumstances that could attract wildlife to or into the game farm (traditional seasonal habitat use and location of travel routes and migration corridors).**

Proposed Action High potential. Wild elk will most likely attempt to gain entry to the game farm. The literature is replete with instances of wild animals being accidentally and intentionally lured into game farms and ending up on the inside of enclosures. This occurs when gates are left open, fence maintenance is poor, or because the wild elk are determined to get inside the enclosure and jump or climb over the fence. The motivation to make contact with estrous females is powerful, and bull elk on either side of the fence will attempt to satisfy this urge. The proposed game farm site is used by 300 native elk that will be constantly aware of the game farm animals, and visa versa. In other states, a large percentage of captive elk came from the wild. In Colorado, 40% of game farm facilities have had wildlife ingress especially during the rut and during winter when food is scarce (Proceedings of Game Farm Workshop, 1992.)

The proposed site of the facility occurs on a large field that has been cultivated in the past and likely continues to draw wild animals to the site. Plans by the operator to plant crops is unknown.

Alternative Action Moderate potential. The effectiveness of double fencing, and the necessary height of fences on severe slopes has not been tested. It is logically assumed that the potential for ingress of wild elk will be reduced with high, double fences. Planting of crops or other vegetation in this area may lure wildlife to the game farm site.

No Action Alternative: No impact.

d. **Deterioration of critical wildlife habitat (capability to produce or sustain wildlife populations).**

Proposed Action Minimal potential. A minimum of 55 acres of very important elk and mule deer winter range will be eliminated, resulting in displacement and thus increased use of remaining habitat on the Grizzly Gulch ridge. This acreage accounts for fenced enclosures only. In addition, the applicant has stated he intends to build a second home on the site and a slaughter house. Whether additional out-buildings would be constructed is unknown. Land use changes in the Helena area (subdivision,roads, etc.) resulting in habitat loss is escalating. Although this proposal would directly impact only 55 acres, it would contribute to the cumulative effect of other land use changes (map 2.) If the operator applies for an expansion of the facility on the 120 acres that he owns at the site, habitat loss would of course increase.

Alternative Action Moderate potential. Slightly more wildlife habitat would be removed through this alternative since the exterior fence would be set out some distance from the interior fence.

No Action Alternative: No impact.

e. **Displacement of wildlife from critical habitat(s) as a result of proposed fences or other factors.**

Proposed Action High potential. Wildlife will be displaced from winter range habitat used for the game farm. Wildlife will be concentrated on remaining habitat in the vicinity of the game farm since options do not exist to move elsewhere. However, nearby private landowners are likely to experience increased pressure from local wildlife that in turn will result in game damage complaints and required action by MDFWP. The reality of cumulative impacts from past occurrences is that wildlife that are now concentrated on the Grizzly Gulch ridge have been displaced from adjacent areas (most of the drainages south of Helena within ten miles) that have been subdivided, roaded, or logged. The concentrations of wildlife currently on the Grizzly Gulch ridge is the culmination of past cumulative impacts.

Alternative Action High potential. Within this alternative, slightly more acreage would be affected since the double fencing would require more land.

No Action Alternative: No impact.

f. Creation of barriers to travel routes or seasonal migration corridors used by wildlife populations.

Proposed Action Low potential. Large barriers are not likely to be created. The Grizzly Gulch ridge occurs along travel routes between neighboring elk herds, and therefore a major concern exists relative to the potential for disease and parasite transmission as a result of contact with game farm animals. The Grizzly Gulch ridge occurs along the line of travel of elk from the Elkhorn Mountains. In addition, elk from the Continental Divide area are known to utilize the ridge then return to their home ranges.

Alternative Action Low potential.

No Action Alternative: No impact.

g. Other conditions that may stress wildlife populations, affecting their diversity, abundance or distribution.

Proposed Action Moderate potential for the game farm to draw in wildlife. Several consequences could result. Artificial concentrations of wildlife are documented to result in animal health problems. A net decline in habitat capacity will occur if the game farm is constructed on the Grizzly Gulch site. If hybrid game farm animals are accidentally brought onto the facility, escapement would result in competition and possible genetic pollution.
If the game farm were to be expanded in the future, an increased use of the habitat to the north may occur. Big game habitat to the north is bounded by the city of Helena (Map 1). The Mount Helena City Park, which encompasses approximately 700 acres and includes the crest of Mount Helena and its junction with Grizzly Gulch, is part of the elk/deer winter range. Increased big game use of the park may occur with resulting possible natural resource impacts.

No Action Alternative: No impact.

h. Changes in the diversity, abundance or distribution of game populations including redistribution of wildlife from habitats that would be rendered unsuitable or inaccessible because of fencing or other factors.

Proposed Action Significant high potential. 120 acres will be under game farm ownership. Currently 55 acres will be fenced into pens. The game farmer may expand the operation in the future and thus further reduce important habitat. Diversity of wildlife would be affected if hybrid game farm animals escape. Abundance of wildlife will be affected if adjacent landowners are not willing to tolerate increased numbers due to displacement. Distribution of wildlife will remain relatively similar except for precluded use of seasonal habitat transformed to game farm.

Alternative Action Moderate potential for the reasons stated above, except that slightly more habitat would be removed from wildlife use with the alternative action.

No Action Alternative: No impact.

i. Changes in the diversity, abundance or distribution of nongame populations (include redistribution of wildlife from habitats that would be rendered unsuitable or inaccessible because of fencing or other factors).

Proposed Action Unknown.

Alternative Action Unknown.

No Action Alternative: No impact.

j. Adverse effects on any unique, rare, threatened or endangered species or their habitats.

Proposed Action Low potential for fauna, and moderate potential for flora. The Natural Heritage program of the Montana State Library indicates that a species of Astragalus (pea family), classified as an S-2 Sensitive Species, occurs in the MT Helena area, immediately adjacent to the proposed game farm. It is not known if this sensitive species occurs on or near the game farm site.
Alternative Action Low potential/Moderate potential for reasons stated above.

No Action Alternative: No impact.

k. **Introduction of any species not presently or historically occurring in the affected area.**

Proposed Action High potential. Introduction of exotic and hybrid wildlife to the wild has occurred on numerous documented occasions (MDFWP, 1992; Kahn, 1992; Game Farm Workshop 1992). It is difficult to visually detect a red deer/elk hybrid from a pure Rocky Mountain elk. Definitive analysis is done through DNA testing. Many game farmers prefer red deer/elk hybrid animals to those of pure strain wild elk because they are easier to handle, they conform to captivity somewhat better than elk, and they are aggressive breeders (Williams, 1992). The serious consequences of exotic and hybrid animals being liberated into the wild, resulted in emergency action by the Montana Fish, Wildlife & Parks Commission instituting emergency rules during 1992 to prevent the transport of certain animals into the State of Montana. Nevertheless, there is the possibility exists of red deer/elk hybrids finding their way to Grizzly Gulch via the proposed game farm.

In addition to the possibility of game farm animals becoming introduced, it is quite possible that new non-endemic species of pathogens and parasites could be released into the wild via game farm stock. For this reason, certain species of exotic and at least 2 species of endemic wildlife are now banned from being imported into Montana. In the case of the latter, white-tailed deer and moose cannot legally be imported if their source of origin is east of the 100th meridian, which roughly parallels the Mississippi River and is thus on the east edge of the Great Plains and the natural barrier to species of parasites which are not endemic to the western states. This concern prompted Alberta, British Columbia and Manitoba to place an import moratorium on all cervids (Kahn, 1991).

Alternative Action Moderate potential. Double fencing in excess of 8 feet in height will certainly reduce the possibility of contact between game farm animals and native wildlife, but it is not known whether contact could be absolutely prevented. If manure and waste feed is properly treated or disposed of, transmittal of pathogens and parasites through this pathway would be reduced. Feeding and watering areas should also be protected from pathogens

No Action Alternative: No impact.

IMPACTS

PHYSICAL ENVIRONMENT (Continued)	UNKNOWN*	NO IMPACTS	MINOR IMPACTS*	POTENTIALLY SIGNIFICANT IMPACTS*	CAN IMPACTS BE MITIGATED?*	COMMENT INDEX
5. FISH/WILDLIFE						
B. What degree of impact would any of the following (a.-f.) have on wildlife populations associated with the site? For items (a.-f.) that would result in impacts, provide a narrative that describes potential consequences.						
a. Introduction and/or transmission of diseases or parasites to wildlife populations associated with the site.				X	Unknown	*
b. Establishment of feral population(s) of escaped game farm animals.				X	Unknown	*
c. Habitat degradation or competition as a result of feral populations or exclusion of wildlife populations from traditional seasonal habitat (including migration corridors).			X			*
d. Hybridization/ genetic pollution of wildlife populations associated with the site.				X	Unknown	*
e. Displacement and/or redistribution of wildlife populations from traditional seasonal habitat (including migration corridors).				X	Unknown	*
f. Other __________						

Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

B. What degree of impact would any of the following (a-f) have on wildlife populations associated with the site? For items (a.-f.) that would result in impacts, provide a narrative that describes potential consequences.

a. Introduction and/or transmission of diseases or parasites to wildlife populations associated with the site.

Proposed Action Significant impact. Inadvertent, introductions of parasites and diseases of major significance have taken place at other sites in Montana and in other states (Appendix C). Numerous diseases and parasites of serious concern are briefly described in Appendix C. Tuberculosis has been documented on 5 Montana game farms (Appendix 20). Transmission of Tuberculosis to free-ranging wildlife populations would have a significant impact. Efforts to control it, to protect wildlife resources as well as the state's livestock industry, would be very expensive and very difficult.

If disease or parasite problems were to occur at the site of the proposed Grizzly Gulch game farm, the potential for dispersal of pathogens and parasites throughout central Montana would be high. This could, conceivably occur throughout the rest of the state. The spread of pathogens and parasites could swiftly happen due to interaction among adjacent big game herds. Plans for the quarantine facility have not been submitted. Adequate design of this facility is essential for disease control.

The game farm application indicates that deer will be included as part of the facility's stock. The source of these animals is of significant concern. White-tail deer and moose, depending upon their origination site, pose a serious threat to all big game ungulate species in Montana through transmission of non-endemic parasites. The likelihood of inadvertently introducing parasites such as Paralaphostrongylus tenuis and Elaphostrongylus cervi, prompted Alberta to close its borders to import of all ungulates in 1988, and British Columbia followed suit in 1991 (MDFWP, 1992).

Manure, other effluent and contaminated soil from the game farm is a recognized dispersal source for transmission of disease and parasites. If it stored in such a manner that wild animals would have access to it, or through erosion and runoff it would be transported below the penned area to public and/or private lands, the potential for inadvertent transmission of these hazards would be high.

Disease pathogens and parasites remain viable in contaminated soil for varying lengths of time (up to several years in the case of Elaphostrongylus cervi) depending upon their life cycle and durability. Game farm animals in New Zealand have been known to contract disease from sites that had housed diseased animal from the previous year. Many parasites of concern are passed through fecal material.

In the case of bovine tuberculosis, if conditions are suitable, the organism may survive up to 3 to 6 months (Dr. Robert Meyer, Regional Epidemiologist, Western Region of Veterinary Services, APHIS, USDA, specializing in bovine tuberculosis). Suitable conditions include a moist cool (or freezing) climate, out of direct sunlight. The Tb organism survives better than most pathogens due to its waxy lipid cell wall which protects it from drying. Moist, cooled fecal material, out of direct sunlight, would provide the correct environment for tuberculosis to remain viable.

Although brucellosis is less durable than tuberculosis, Dr. Calvin Campbell (Regional Epidemiologist, Wester Region of Veterinary Services, APHIS, USDA, specializing in brucellosis), the organism can remain viable for days or weeks if cool moist conditions exist. If an animal is infected, some pathogenic discharge will occur via saliva and nasal discharge or through body waste, however infective dosages do not exist. Fluids associated with the birthing process are the source of brucellosis transmission. A means of preventing the immediate or latent spread of this disease is to immediately pick up, bag and adequately dispose of aborted fetuses, placentas, and other afterbirth since nose contact with these materials is the method of transmission. Isolation of female animals in an area by themselves where they may calve and clean the newborn further aids in stemming contamination and transmission of brucellosis.

Alternative Action Unknown impact. Although double fencing may reduce the likelihood of contact between animals, contaminated soil and manure piles remain a source of potential transmittal. Methods to prevent manure from being a source of pathogens and parasites to wildlife could reduce potential.

There is some possibility of game farm animals escaping during transport between destinations. The road from the game farm to the main Grizzly Gulch road is narrow and goes through Helena National Forest lands. If a vehicle transporting game farm animals were involved in an accident, the possibility exists for potentially diseased animals to escape.

No Action Alternative: No impact.

b. Establishment of feral populations of escaped game farm animals.

Proposed Action Significant impact. Kahn (1992) cites four instances in Colorado where exotic wildlife became established in the wild. He reports:

"Among those cases documented in Colorado, the success of efforts to recapture escaped wild ungulates has varied widely -- from all to none. Some escaped elk, red deer or elk/red deer hybrids have been recovered (dead or alive) by owners in 60% of the cases. However in only about 33% of the cases have all escaped animals been recovered. At least six captive elk have been shot by hunters during the past four years; these harvests have occurred up to 30 miles from the facility of origin. Recovery efforts have been even less successful for other escaped species; in 67% of the documented cases owners of escaped exotics have failed (or in some cases not even attempted) to recover animals at large. The consequences of failing to recover escaped captive animals has included establishment of free ranging populations of ibex, Barbary sheep, red deer and fallow deer, as well as the potential genetic contamination of native elk and bighorn sheep populations. The Colorado Division of Wildlife has spent in excess of $150,000 during the past four years in efforts to control and eliminate these escaped populations of exotic wildlife. In spite of these resources the efforts to date have not been 100% successful.

Based on cases documented in Colorado, attempts to recapture escaped captive wildlife are usually only partially successful at best; moreover, escaped individuals can remain at large and survive in the wild for extended (or indefinite) periods of time, and can range significant distances from facilities of origin. Species, group size, acclimation to and duration of confinement, facility location and surrounding habitat type, timeliness of detecting escape, and efforts expended in recapture attempts all appear to influence the likelihood of owners recapturing escapees.

The issue of escape and recapture (and ingress of native wildlife) of captive wildlife is critical to wildlife agencies concerned about the effects of captive wildlife on native wildlife. In Colorado we have demonstrated that captive wildlife can escape and can subsequently intermix with native animals. This heightens concern for disease transmission, genetic contamination and habitat competition."

By statute all game farm animals must be identified (§ 87-4-414(3), MCA). In the event of an escape, the MDFWP and the operator would need to agree on a method of recovery and ultimate disposition of animals which were not recovered.

Vandalism to fences is an other way for escapes to occur, and yet it is doubtful whether there is any method to prevent this possibility.

Section 5.B.a. addresses accidental escape of game farm animals during transport.

Alternative Action Unknown impact. High, double fencing may reduce the possibility of escapes or ingress of native wildlife. However, this method has not been extensively tested to any degree and wild animals, under the right conditions or motivation, have been known to overcome some of the most elaborate fencing systems. The literature repeatedly reports that if animals are adequately motivated to enter, or a captive animal is adequately motivated to escape, that they overcome fences that in other circumstances have appeared adequate to prevent ingress and egress.

A contingency plan to recapture escaped animals could be set as a condition of licensing.

Genetic testing of all game farm animals to be brought to the site would reduce the potential impact of escape or ingress to native wildlife populations. Mandatory genetic testing of game farm animals by the operator would be a condition of licensing, however, testing technology is good for screening of first generation hybrids only. It is less accurate on succeeding generations. It cannot be relied upon totally to substantiate genetic purity.

No Action Alternative: No impact.

c. Habitat degradation or competition as a result of feral populations or exclusion of wildlife populations from traditional seasonal habitat (including migration corridors).

Proposed Action Moderate impact. Winter habitat will be reduced. Animals will redistribute and possibly concentrate on remaining habitat. The game farm itself may draw native wildlife to the site and result in habitat degradation of the surrounding lands. It is expected that if feral populations become established, they would likely be composed of red deer/elk hybrids, so hat the impact of competition between genetically pure and hybrid animals will not be readily distinguishable.

Alternative Action: Moderate impact - same as above.

No Action Alternative: No impact.

d. Hybridization/genetic pollution of wildlife populations associated with the site.

Proposed Action High impact. If hybrid animals were to find their way onto the Grizzly Gulch game farm and then escape, breeding with native populations would be a certainty since native animals are immediately available, and because red deer and red deer hybrids reproductively out-compete elk. The pool of 7,000 elk (map 2) in the greater Helena area could be affected relatively quickly (Kahn 1991). Serious concerns remain regarding the possible elimination of true Rocky Mountain elk through cross breeding.

Interbreeding of exotic deer with native mule deer could result in similar genetic pollution.

Alternative Action Moderate impact. High, double fencing is expected to work better for elk than for deer. Deer are highly adept at getting through and over fencing. Genetic testing cannot be relied upon to assure genetic purity (See 5.B.b.) of game farm animals.

No Action Alternative: No impact.

e. Displacement and/or redistribution of wildlife populations from traditional seasonal habitat including migration corridors.

Proposed Action Potentially significant. Increased depredation most likely will occur on adjacent private lands as local wildlife is prevented from using the proposed site. Wildlife displacement as a result of changing land uses is a familiar scenario in Montana. The consequences are predictable and negative for native wildlife as well as the public. As wildlife are displaced onto private lands, the landowners complain of wildlife depredation and demand relief. Landowner tolerance can be a contributing factor in wildlife population discussions similarly, as the land base for wildlife is reduced, so ultimately is the total population. Private lands are often closed to the general public when hunting privileges are sold or fee hunting or other restrictions are instituted. Recently, large blocks of private lands are being converted from native range and forest to subdivisions in Grizzly Gulch, Oro Fino, Nelson and Colorado Gulches. Public lands (see Map 2) therefore, are assuming significantly greater importance to native wildlife. The proposed facility is an isolated inholding within the Helena National Forest on the Grizzly Gulch ridge. The game farm's impact, therefore, exceeds that which it would otherwise have in another location.

Alternative Action Potentially significant impact.

No Action Alternative: No impact.

PHYSICAL ENVIRONMENT (Continued)

5. FISH/WILDLIFE (Continued)

IMPACTS

	UNKNOWN*	NO IMPACTS	MINOR IMPACTS*	POTENTIALLY SIGNIFICANT IMPACTS*	CAN IMPACTS BE MITIGATED?*	COMMENT INDEX
C. Species potentially significantly impacted: For each wildlife species (or group of species) that would be potentially significantly impacted, state the factor(s) to which the impact(s) are attributed and address the following:						
a. Estimated size of affected wildlife population(s).				X	Unknown	*
b. Year-round distribution of affected wildlife population(s).			X		Unknown	*
c. Characterization of wildlife use (year-round v. seasonal) of the area to be impacted, including reference to any special habitat features.			X		Unknown	*
d. Proportion (%) of the total habitat area that is currently used, that will be enclosed or otherwise impacted.			X		Unknown	*
e. Other. ___________						*

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

C. Species potentially significantly impacted: For each wildlife species (or group of species) that would be potentially significantly impacted, state the factor(s) to which the impact(s) are attributed and address the following in narrative format.

a. Estimated size of affected wildlife population(s).

Proposed Action: Potentially significant and it is unknown as to whether impacts can be mitigated.

ELK: The definition of "affected populations", for purposes of this analysis, begins with the elk herd segment that traditionally utilizes the Grizzly Gulch ridge. The elk herd that uses hunting district (HD) 835 (HD in which the proposal occurs) is approximately 650 (see Map 2). Two elk herd segments occur within this district. The northern portion of this herd is approximately 300 elk. The majority of this group utilize the Grizzly Gulch ridge during some portion of the year. Winter survey data gathered by MDFWP indicates that at any one time, 187 elk have been observed in the immediate vicinity of the proposed game farm. Winter surveys are conducted one day per year, so this figure is conservative. Radio-collar information indicates that most of the 300 animals in the north herd segment use the ridge. Approximately 7,000 elk inhabit 8 hunting districts (835, 839, 843, 892, 880, 818, 293, 215) in the Helena area (Map 2).

MULE DEER: Approximately 600 mule deer occur in HD 835. The Grizzly Gulch ridge is utilized by at least 200 mule deer as determined by winter aerial surveys. Mule deer figures for the greater Helena area are approximately 10,000.

MOOSE: Approximately 25 moose occur in Hunting District 835. The Grizzly Gulch ridge is utilized at least during winter by moose.

WHITE-TAILED DEER: White-tailed deer have not been inventoried in the Helena area. Whitetails do occur throughout the Helena area and appear to be gradually increasing in number.

BLACK BEAR: Unknown numbers of black bear occur within Hunting District 835. Although the Grizzly Gulch ridge is used by black bear, and bears have been reported to retreat to the ridge from areas of human inhabitation, approximate numbers of bears using the ridge itself is not known.

MOUNTAIN LION: Unknown numbers of mountain lions occur within Hunting District 835. Although the Grizzly Gulch ridge is used by lions, and lions have been reported on the ridge, approximate numbers of lions using the ridge is not known.

SMALL MAMMALS AND BIRDS: Unknown numbers.

b. Year-round distribution of affected wildlife population(s).

Proposed Action: Moderately significant and it is unknown as to whether impacts can be mitigated.

ELK: Information gathered on over 400 elk radio-marked in the Helena area demonstrates that the elk herd using the Grizzly Gulch ridge comes into contact with all surrounding elk herds (in at least 8 hunting districts). This contact is made during emigration, on seasonal ranges other than winter range, on winter ranges, and when animals adopt new territorial patterns. This type of contact is a progressive process, so that no elk herd is isolated or immune from contact with elk from other herds. Essentially, all wild elk herds in Montana comes into contact with each other over time. Radio-marked animals have indicated that elk return year after year to the same site and have traditional, specific winter range areas.

Fifteen elk were radio-marked in the northern herd of Hunting District 835 in 1988. Nine of these are known to have used the Grizzly Gulch ridge, and 7 of these focused their winter range Geographic Center of Activity in the area of the proposed game farm itself (Map 3). Two elk originally marked on the Grizzly Gulch ridge established new home ranges in adjacent hunting districts. Elk from other herds displaying juvenile wandering tendencies or distinct emigration have been tracked through the northern herd segment of Hunting District 835. One neckbanded female and one radio-collared male from the Elkhorn Mountains are known to have moved through the Grizzly Gulch elk herd in route to (in the case of the female) and toward (in the case of the male) the Blackfoot Clearwater Wildlife Management Area. Such movements demonstrate contact between elk herds and the potential for widespread, negative impacts to native wildlife.

MULE DEER: Information gathered from mule deer studies in Montana indicate that, as with elk, mule deer herds contact one another in the progressive fashion that elk herds intermingle.

MOOSE: The extent of moose occurrence in the Helena area is generally limited to the north, with the Marysville area constituting the rough northern limit of distribution. However, moose distribution to the west, south and east is continuous.

WHITE-TAILED DEER: Whitetails occur throughout the hunting district and in all districts surrounding Helena. Specifically, whitetails occur in all the drainages emanating from the Grizzly Gulch ridge (Grizzly Gulch, Colorado Gulch, Nelson Gulch, Ten Mile Creek).

BLACK BEAR: Black bears occur throughout the hunting district and in all districts surrounding Helena. Black bears occur on the Grizzly Gulch ridge during all seasons of the year but probably do not den on the ridge due to lack of north slopes and heavy snow packs conducive to denning conditions.

MOUNTAIN LION: Mountain lions occur throughout the hunting district and in all districts surrounding Helena. Mountain lions occur on the Grizzly Gulch ridge, and likely utilize it more during winter than other season because it provides a strong prey base.

SMALL MAMMALS AND BIRDS: Dozens of small mammals and birds known to occur within this latilong of Montana have not been summarized or analyzed relative to occurrence and distribution on the Grizzly Gulch ridge. Inadequate time was available for this analysis due to limitations imposed by existing game farm statutes.

c. **Characterization of wildlife use (year round v. seasonal) of the area to be impacted, including reference to any special habitat features.**

Proposed Action: Minor impacts and it is unknown whether impacts can be mitigated. The proposed site occurs on the eastern slope of the Grizzly Gulch-Ten Mile Creek ridge, with an upper elevation of 5200 feet. It is characterized by open stands of mature ponderosa pine and douglas fir with stands of lodgepole pine. Expanses of native grassland and a large fallow field constitute major openings along the upper reaches of the ridge. The ridge is bisected by short east-west drainages that give significant variety to the terrain and thus diverse wildlife habitat.

The proposed site is used year-long by elk and mule deer, occasionally by white-tailed deer and moose. Occasionally black bears and mountain lions utilize the area. Nesting birds, particularly those requiring ponderosa pine, such as flammulated owls, and pileated, hairy and downy woodpeckers would be individually and cumulatively affected with removal of trees. Timber harvest is planned as part of the property clearing, to afford visibility of all fences by farm operators (Jerry Christison, personal conversation, December 4, 1992).

It is important to note that ponderosa pine habitats significant but a diminishing resource in Montana.

No Action Alternative: No impact.

d. **Proportion (%) of the total habitat area that is currently used, that will be enclosed or otherwise impacted.**

Proposed Action: Minor impacts and it is unknown whether impacts can be mitigated. Wildlife would be prevented from using approximately 1% of the Grizzly Gulch ridge if the 55 acre game farm fence enclosure is constructed. Although the percentage is small, the proposed site is in big game winter range. Traditional wildlife use and the importance of this habitat would suggest that the game farm enclosure will be surrounded by native wildlife, with possible habitat deterioration. The consequences of eliminating only 1% of the big game winter range on the Grizzly Gulch ridge becomes disproportional to the land area enclosed.

The game farm operator is negotiating to purchase approximately 120 total acres and has a buy-sell agreement. Although the current application addresses a 55 acre operation, expansion of the game farm/shooting preserve is a possibility. At that point, an amendment to the current license could be requested and another environmental analysis would have to be conducted. Should that expansion be granted, a proportionately larger percentage of the Grizzly Gulch ridge winter range would be affected.

Alternative Action With double 12 foot fencing, the results would be somewhat greater than the proposed action since more acreage would be enclosed.

No Action Alternative: No impact.

e. Other. *Monitoring.* Economic information provided by Colorado Division of Wildlife (Richard Kahn, 1991) discloses that the costs of monitoring game farms in that state is $200,000 annually just for the people involved. No operations expenses were provided. A Montana game farm license costs $100 initially and $25 per year thereafter. Montana's 101 game farms generate less than 1.5% of the necessary revenue to oversee/monitor the operations. Monitoring of the Grizzly Gulch game farm would cost approximately $3,500/yr in personal services and operational expenses. This cost is based upon 12 unscheduled ground and aerial inspections of the facility. The cost estimate does not include testing game farm animals.

Animal Destruction Compensation. Montana Statute (81-2-201, MCA) provides for compensation to livestock owners whose stock become diseased, or whose herds are found to contain animals that are banned due to genetic impurity (red deer for example) and are *ordered destroyed by the Montana Board of Livestock. Alberta and Colorado,who both have statutes have paid $14.5 million and $0.5 million in indemnity payments. In Montana, game farmers could also receive indemnity compensation. Montana law provides compensation for animals ordered destroyed by the Board of Livestock due to disease. (§ 87-2-201, MCA) The Board of Livestock pays $50 and MDFWP has agreed to match that amount whenever game farm animals are ordered destroyed. (Game Farm Workshop, Boise, ID, March 1992).*

Construction and Maintenance of Holding Facilities. Adequate state holding facilities must be identified to care for confiscated animals. Financial resources to cover these needs are not currently available.

	IMPACTS					
HUMAN ENVIRONMENT	UNKNOWN*	NO IMPACTS	MINOR IMPACTS:*	POTENTIALLY SIGNIFICANT IMPACTS:*	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
6. NOISE EFFECTS						
Will the proposed action result in:						
a. Increases in existing noise levels?			X		Yes	*
b. Exposure of people to severe or nuisance noise levels?			X		Yes	*
c. Other:__________						

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Noise/Electrical Effects (Attach additional pages of narrative if needed):

a. Increases in existing noise levels?

Proposed Action: Minor Impact. Transportation of animals and related traffic associated with the game farm operation; the discharging of firearms associated with a shooting preserve. Depending on frequency, this impact could be negligible.

No Action Alternative: No impact.

b. Exposure of people to severe or nuisance noise levels?

Proposed Action: Minor Impact. There would be minor impact only to immediate neighbors, or trail users at times of transport of animals and related traffic associated with the game farm operation. Depending on frequency of shooting on the property, impact may be elevated. However, hunting has historically taken place in this area.

No Action Alternative: No impact.

IMPACTS

HUMAN ENVIRONMENT (Continued)	UNKNOWN*	NO IMPACTS	MINOR IMPACTS:*	POTENTIALLY SIGNIFICANT IMPACTS:*	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
7. LAND USE						
Will the proposed action result in:						
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?			X			*
b. Conflict with a designated wildlife management area, natural area or area of unusual scientific or educational importance?				X	Unknown	*
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				*
d. Conflict with any existing land use that would be adversely affected by the proposed action.			X		Unknown	*
e. Adverse effects on or relocation of residences?		X				
f. Other:___________						

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Use (Attach additional pages of narrative if needed):

a. **Alteration of or interference with the productivity or profitability of the existing land use of an area?**

Proposed Action: Minor Impact. The establishment of a family owned business (game farm). This operation has the potential to be beneficial to the operators. The area currently is residential (2 homes) and although a fallow hayfield is on the property, it has not been used as an agricultural operation for quite some time. Presently, there are horses being pastured in the meadow.

No Action Alternative: No impact.

b. **Conflict with a designated wildlife management area, natural area or area of unusual scientific or educational importance?**

Proposed Action: Potentially Significant Impacts. This area has been traditionally utilized for wildlife for habitat purposes with limited grazing by livestock. As stated in the Fish and Wildlife section of this assessment, there are several potentially significant impacts that may or may not be able to be mitigated. Federal Legislation is pending on the MT Helena ridge for be classification as a national recreation/education corridor. The 60 day game farm application period does not provide enough time to thoroughly explore and identify methods which would reduce impacts to an acceptable level.

No Action Alternative: No impact.

c. **Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?**

Proposed Action: No Impact. The Mount Helena trail borders the proposed site. Visual and aesthetic qualities negatively impacted, however, those same qualities could be enhanced for those wishing to view and photograph captive elk.

Alternative Action: The possibility that trail users may be potentially affected by potential year-round shooting can be mitigated by controlled shooting times with the general hunting season.

No Action Alternative: No impact.

d. **Conflict with any existing land use that would be adversely affected by the proposed action.**

Proposed Action: Minor Impact. The shooting preserve component could add potential safety/aesthetic impacts. The view could negatively affect trail users. Residents of Grizzly Gulch may object to the presence of a feed lot operation in the vicinity.

No Action Alternative: No impact.

e. **Adverse effects on or relocation of residences?**

Proposed Action: No impact.

No Action Alternative: No impact.

IMPACTS

HUMAN ENVIRONMENT (Continued)

8. RISK/HEALTH HAZARDS

Will the proposed action result in:

	UNKNOWN*	NO IMPACTS	MINOR IMPACTS:*	POTENTIALLY SIGNIFICANT IMPACTS:*	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
a. Risk of dispersal of hazardous substances (including, but not limited to chemicals or pathogens) in the event of an accident or other form of disruption?	X			X	Unknown	* *
b. Creation of any hazard or potential hazard to domestic livestock?				X	Unknown	*
c. Creation of any human health hazard or potential hazard?				X	Yes	*
d. Creation of any safety hazard to nearby dwellings, residents or recreationists as a result of firearms discharge on the premises of the proposed game farm?						
e. Other:________						

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Risk/Health Hazards (Attach additional pages of narrative if needed):

a. Risk of dispersal of hazardous substances (including, but not limited to chemicals or pathogens) in the event of an accident or other form of disruption?

Proposed Action: Unknown. Application materials do not indicate any hazardous substances will be housed at the proposed development. Fuels and chemicals which may be stored on site such as insecticides and herbicides are normally purchased in volume that could contribute a potential hazard if not stored in an approved method. Feces and afterbirth pose major long-term effects on native wildlife if disease is established or transmitted between native and captive wildlife.

Alternative Action: Applicant has said that fuels and chemicals will be kept on site in amounts commensurate with household use. (Telephone conversation with Jerry Christison, December 7, 1992). Fecal material should be collected, bagged and disposed of at a site not frequented by native wildlife, domestic livestock or humans. Calving afterbirth, aborted fetuses and other such materials could be collected and disposed of at a site not utilized by wildlife or livestock in compliance with state and local codes.

No Action Alternative: No impact.

b. Creation of any hazard or potential hazard to domestic livestock?

Proposed Action: Potentially Significant. The threat of disease transmission from captive cervids to domestic livestock could be an issue of significant concern. Transmission of disease or parasites, particularly bovine tuberculosis or brucellosis through direct contact with wildlife that have been in contact with the game farm animals or their feces is possible. Transmission of tuberculosis to free-ranging wildlife populations could have far reaching, serious impacts (Appendix C). An in-depth analysis of livestock distribution and livestock operators in the Grizzly Gulch and Ten Mile Creek drainages was not possible due to time limitations, however, at least 3 major livestock operations (Alm, R-V Ranch, Grunenvelder) occur on or adjacent to the Grizzly Gulch ridge.

Assessment of the disease transmission potential posed by any herd of captive cervids is hampered by deficiencies in existing disease testing procedures when they are applied to cervids. The reliability of test results in cervids compared to livestock is significantly lower. Some diseases, such as tuberculosis and paralaphostrongylus tenuis, lack accurate diagnostic tests; in addition, diagnostic test have not even been developed for a number of wildlife diseases (Appendix C).

Norman Alm of Helena, Montana, currently holds a forest service permit on Helena National Forest lands adjacent to the proposed site. Potential exists for transmission of disease and/or parasites to domestic livestock from captive elk through numerious vectors (air, water, contaminated soil, etc). Cattle may come in contact with elk should fences breach, or livestock range into facility area.

Alternative Action: Feces removal; afterbirth and calving remnants collected and disposed of in an area not utilized by native wildlife or domestic animals, and approved by County and Department of Health and Environmental Sciences for disposal of potentially diseased materials could be a condition of licensing. A fence inspection/maintenance program would reduce the potential of ingress and egress of captive and non-captive animals. If certain highly contagious diseases were to be transmitted from the game farm, the impact could not be mitigated.

No Action Alternative: No impact.

c. Creation of any human health hazard or potential hazard?

Proposed Action: Potentially Significant. Some diseases, such as tuberculosis, lack accurate diagnostic testing. Some of the more common diseases that humans are capable of contracting from wildlife include brucellosis (undulant fever) and bovine tuberculosis. In the Animal Health Addendum to Appendix C, the statement is made that "Bovine tuberculosis poses a substantial human health threat. If Montana wildlife populations were to be infected with Tb, hunting and other wildlife-related recreational activities that are currently public assets would be transformed into human health hazards". A full analysis of the potential for human health hazards was not possible due to time limitations imposed by existing game farm statutes.

No Action Alternative: No impact.

d. Creation of any safety hazard to nearby dwellings, residents or recreationists as a result of firearms discharge on the premises of the proposed game farm?

Proposed Action: Potentially Significant at times when the shooting preserve license is utilized. Use of the shooting option attached to the game farm license, by the game farm operator raises this concern. A neighboring residence is located approximately 30 yards east of the proposed game farm pen fence and the MT Helena ridge recreation trail parallels the game farm boundary on the west. Animals killed within the compound could be tested for diseases before removal from the site so as to further assure the containment of disease beyond the facility.

Alternative Action: Shooting could be limited to the slaughtering operation.

No Action Alternative: No impact.

IMPACTS

HUMAN ENVIRONMENT (Continued)	UNKNOWN*	NO IMPACTS	MINOR IMPACTS:*	POTENTIALLY SIGNIFICANT IMPACTS:*	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
9. COMMUNITY IMPACTS						
Will the proposed action result in:						
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?	X X				Unknown	
b. Alteration of the social structure of a community?				X	Unknown	*
c. Alteration of the level or distribution of employment or community or personal income?			X			*
d. Changes in industrial or commercial activity?	X					*
e. Changes in historic or traditional recreational use of an area?			X			*
f. Changes in existing public benefits provided by affected wildlife populations and wildlife habitats (educational, cultural or historic)?	X					
g. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?						
h. Other:__________						

* *Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.*

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Community Impacts (Attach additional pages of narrative if needed):

a. Alteration of the location, distribution, density, or growth rate of the human population of an area?
Proposed Action: Unknown impact.

No Action Alternative: No impact.

b. Alteration of the **social structure of a community?**

Proposed Action: Unknown impact.

No Action Alternative: No impact.

c. Alteration **of the level or distribution of employment or community or personal income.**

Proposed Action: Potentially Significant. Applicant will be using retirement funds to establish a sustainable income from the operation. Impact to the community at is large minor from this source. Two families will benefit from the operation income and game farming can be a lucrative endeavor. Applicant hopes to run a successful operation with a return (see business plan and application). Fuels, agricultural supplies and other materials purchased to construct and maintain the facility would inject dollars into the community. Other considerations associated with recreation in the area may be affected. Figure 2 illustrates the economic influence of deer and elk hunting in the Helena area through both net expenditures and net value. "Expenditures" include food, lodging, gasoline, those items actually purchased in the community. It does not include the cost of the hunting license. "Net value" (net willingness to pay) is a measure of value in benefit cost analysis that is often used as a standard (Brooks, 1988). "Net value" is the value of the hunt to the average hunter, i.e. the level at which he/she values the hunting experience. The expenditure and net value figures are based on standard economic practices (Brooks, 1988; Brooks, 1988) using 1989 dollars, so all estimates given here are low.

Eight hunting districts (HDs) immediately surrounding Helena were used to evaluate economic conditions generated by local deer and elk populations. Economic values are calculated based on hunter days spent within each hunting district. Hunter numbers and hunter days are calculated through the statewide hunter participation and harvest surveys conducted annually. 1991 hunter harvest survey information was used.

No Action Alternative: No impact.

d. **Changes in industrial or commercial activity?**

Proposed Action: Minor impact. Minor change from traditional agricultural operation to alternative ranching.

e. **Changes in historic or traditional recreational use of an area?**

Proposed Action: Unknown. Game farm could affect trail users in area. However, proposed site historically has been used for agriculture and is currently posted against trespassing (public use). Potential change in historic wildlife use of area (see Fish and Wildlife section).

No Action Alternative: No impact.

f. **Changes in existing public benefits provided by affected wildlife populations and wildlife habitats (educational, cultural or** historic)?

Proposed Action: Minor impact. The proposed action could alter current wildlife population behaviors in area. Wildlife is considered an important attribute of Mt. Helena trail experience. There would also be an impact associated with the view such as the changing of a natural setting to a feedlot operation may be viewed as negative. Alternately, people wishing an opportunity to view and photograph elk may consider the game farm operation.

No Action Alternative: No impact.

g. Increased traffic hazards or effects on existing transportation facilities or patters of movement of people and goods?

Proposed Action: Unknown. May have a minor impact as it relates to traffic on Grizzly Gulch, traffic patterns and hazards turning on or off of the main thoroughfare. There may be an increase in traffic as a result of people coming to the facility to view and photograph game farm animals.

No Action Alternative: No impact.

IMPACTS

HUMAN ENVIRONMENT (Continued)	UNKNOWN*	NO IMPACTS	MINOR IMPACTS:*	POTENTIALLY SIGNIFICANT IMPACTS:*	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
10. PUBLIC SERVICES/ TAXES/UTILITIES						
Will the proposed action:						
a. Have an effect upon or result in a need for new or altered services provided by FWP and Dept. of Livestock to accomplish regulation of the game farm industry (inspections, animal counts, disease testing and monitoring, tattoo inspections, etc.)				X	Unknown	*
				X	Unknown	*
b. Have an effect upon the local or state tax base and revenues?			X		Unknown	*
c. Result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?						
d. Other:__________						

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Public Services/Taxes/Utilities (Attach additional pages of narrative if needed):

a. **Have an effect upon or result in a need for new or altered services provided by FWP and Dept. of Livestock to accomplish regulation of the game farm industry (inspections, animal counts, disease testing and monitoring, tattoo inspections, etc.)**

Proposed Action: Potentially Significant. Increased inspection and monitoring efforts by law enforcement and wildlife personnel from the region would be required. Control and possible dispatching of escaped game farm elk may also be necessary with a cost to the MDFWP as a result. (Appendix C.)

Alternative Action: Increase or redirection of staff and operations funding for Region 8 law enforcement and wildlife personnel in order to adequately monitor the game farm for regulation compliance. Redirection of funds and effort by regional enforcement and wildlife personnel would be necessary to adequately monitor this facility for compliance.

No Action Alternative: No impact.

b. **Have an effect upon the local or state tax base and revenues?**

Proposed Action: Potentially significant. The game farm will be a small family business with an individual profit potential. The property would remain taxed at an agricultural level and it is unknown how it will specifically affect the tax base. In a worse case scenario such as a disease outbreak, major impact to the local or state tax base and revenues could be affected. (See section 9c, page 32).

c. **Result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems or communications?**

Proposed Action: Minor unless operation requires expanded utilities. Septic needs may increase with new residents on property. Water supply is currently drawn from wells on the property.

No Action Alternative: No impact.

IMPACTS

HUMAN ENVIRONMENT (Continued)	UNKNOWN*	NO IMPACTS	MINOR IMPACTS:*	POTENTIALLY SIGNIFICANT IMPACTS:*	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
11. AESTHETICS/ RECREATION						
Will the proposed action result in:						
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?	X				Unknown	*
b. Alteration of the aesthetic character of a community or neighborhood?			X		Unknown	*
c. Changes in the quality or quantity of recreational opportunities and settings?			X		Unknown	*
d. Other:__________						

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Aesthetics/Recreation (Attach additional pages of narrative if needed):

a. **Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?**

Proposed Action: Unknown. The Friends of MT. Helena group has expressed concern over the aesthetic qualities of a feed lot operation in plain view of the trail. (Letter from Friends of MT. Helena dated November 20, 1992). A large element of the recreational attractiveness of MT. Helena City Park and the National Recreational Trail comes from the unique scenic vistas afforded by the Park/NRT trail system. Views from the NRT adjacent to Mr. Christison's property are almost entirely of undeveloped forest and rangeland, with the exception of the facility site. The city of Helena itself is not visible from this area. FOMH believes that game-proof fencing and other structural developments that may be required for

a game farm will have an inevitable and adverse impact on the aesthetic qualities of the park, the NRT and the experience they provide.

No Action Alternative: No impact.

b. Alteration of the aesthetic character of a community or neighborhood?

Proposed Action: Minor impact due to a change from open grassland/timbered area to "feedlot" site. The site would still retain its rural character with a 55 acre development in the middle part of the 120 acres. Site would be visible to the general public only from the MT Helena trail. The site would not be visible from Grizzly Gulch road.

No Action Alternative: No impact. The area would remain open grassland/timber.

c. Changes of the quality or quantity of recreational opportunities and settings.

Proposed Action: Minor impact. The game farm operation will not damage the quantity of opportunity. From a recreational quality setting, the game farm will alter the character of the Mt. Helena trail and the quality of experience of the area. (Letter from Friends of MT Helena, November 20, 1992). The property will remain closed to the general public for public use. [Meeting with Jerry Christison December 4, 1992.]

No Action Alternative: No impact.

IMPACTS

HUMAN ENVIRONMENT (Continued)	UNKNOWN*	NO IMPACTS	MINOR IMPACTS:*	POTENTIALLY SIGNIFICANT IMPACTS:*	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
12. CULTURAL/ HISTORICAL RESOURCES						
Will the proposed action result in:						
a. Destruction or alteration of any site, structure or object of prehistoric, historic, or paleontological importance?	X					*
b. Physical change that would affect unique cultural or historic values?	X					
c. Effects on existing religious or sacred uses of a site or area?	X					
d. Other:__________						

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Cultural/Historical Resources (Attach additional pages of narrative if needed):

a. Destruction or alteration of any site, structure or object of prehistoric, historic, or paleontological importance?

Proposed Action: While the impacts are unknown, they could be potentially significant. The State Historic Preservation Office, (Appendix E) has noted that further study of this area is merited. Game Farm/Shooting Preserve Application, time frame does not allow for the study of these issues in depth. The Montana Antiquities Act (§22-3-421 through §22-3-442, MCA) is applicable only on projects initiated on state-owned property.

No Action Alternative: No impact.

b. Physical change that would affect unique cultural or historic values?

Proposed Action: Unknown impact.

No Action Alternative: No impact.

c. **Effects on existing religious or sacred uses of a site or area?**

Proposed Action: Unknown impact.

No Action Alternative: No impact.

IMPACTS

SIGNIFICANCE CRITERIA	UNKNOWN *	NO IMPACTS	MINOR IMPACTS:*	POTENTIALLY SIGNIFICANT IMPACTS:*	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
13. SUMMARY EVALUATION OF SIGNIFICANCE Will the proposed action, considered as a whole:						
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources which create a significant effect when considered together or in total.)				X	Unknown	*
b. Involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?				X	Unknown	*
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?	X					

IMPACTS

SIGNIFICANCE CRITERIA	UNKNOWN*	NO IMPACTS	MINOR IMPACTS:*	POTENTIALLY SIGNIFICANT IMPACTS:*	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
13. SUMMARY EVALUATION OF SIGNIFICANCE						
Will the proposed action, considered as a whole: (Cont'd)						
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?	X					
e. Generate substantial debate or controversy about the nature of the impacts that would be created?				X	Unknown	*
f. Other:______________						

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Cultural/Historical Resources (Attach additional pages of narrative if needed):

a. **Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources which create a significant effect when considered together or in total.)**

Proposed Action: Potentially significant impact. Wildlife, soils; water; human/disease/safety, land use are individually and cumulatively may be potentially significantly impacted. A no action alternative would avoid these impacts. Due to 60 day application time frame, not enough time to thoroughly explore and identify mitigating methods which would reduce impacts to acceptable level. Mitigation of impacts to wildlife, soil, water and risks posed to human health and safety are unknown at this time.

No Action Alternative: No impact.

b. **Involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?**

Proposed Action: Potentially significant impact. Individually and cumulatively disease, hybridization of native species, and safety may be potentially significantly impacted. The 60 day game farm application time frame does not provide enough time thoroughly explore and identify mitigating methods which would reduce impacts to acceptable level.

No Action Alternative: No impact.

c. **Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?**

Proposed Action: Unknown

No Action Alternative: No impact.

d. **Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?**

Proposed Action: Unknown. The establishment of this facility would be in an environmentally and aesthetically sensitive area.
No Action Alternative: No impact.

e. **Generate substantial debate or controversy about the nature of the impacts that would be created?**

Proposed Action: Potentially significant. The proposal has already generated a great deal of debate and controversy as well as raising other issues related to game farms in general. Many people who attended the public scoping meeting on November 19, 1992, came with the expectation of being able to offer comment and gain specific information about the proposal. This level of participation indicated significant public interest and opinion on the proposal.

No Action Alternative: No impact.

Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:

Proposed Action: The action, as proposed by the applicant has several potentially significant impacts. It is unknown whether these impacts can be mitigated.

Alternative Action: While it is appropriate to consider and discuss alternatives to the proposed action, it is questionable whether any of the following mitigation measures will be effective or adequate. It is unknown whether these measures have been tested elsewhere. Considering conventional techniques utilized on other sites, and the sensitivity and circumstances of the proposed Grizzly Gulch site, the following mitigation measures should be considered.

1. Random and frequent aerial and ground monitoring by wildlife and enforcement personnel (12 per year) to detect ingress or egress and to assess the status of the game farm animal population and assure security and integrity of the facility.

2. Conventional game farm fencing, involving a single 8 foot fence, will not be adequate on the proposed site to keep wildlife and game farm animals from making contact. Fences constructed 12 feet high, with either mesh or high-tensile wire are proposed but may not be adequate.

3. Double fences with at least 10 feet between the internal and external structures around the perimeter of the game farm compound. This measure may not be adequate and it may also pose a threat of physical injury to animals attempting to jump the fence if the space between the fences proves to be inadequate.

4. In order to negate the possibility of gates being left open which could cause ingress and egress problems, no gates should be located on the exterior perimeters of either of the fences. Gates should be placed only at points where animal handling and transportation areas will be established.

5. The fences should be construction with a combination of wooden and metal fence posts to reduce fence breaching from various sources such as fire (wooden posts) and pressure loading as in the case of drifting snow and sparring elk (metal posts bend with weight). Corners should be reinforced and the wire/mesh should properly be stretched so as to insure maximum strength.

6. Substances such as manure, waste feed, animal by-products from calving, slaughtering, and velveting, etc. should be collected and removed from the site to an approved location that is not available to big game animals, domestic livestock or humans.

7. Feed bunks and watering troughs should be elevated above the ground to reduce the potential initiation and transmission of disease,

8. The perimeter of the enclosure should have soil berms built up to a height high enough to control run-off and effluent from the property.

9. Best management practices for water quality maintenance (319 Plan) should be applied.

10. DNA and disease testing of any new game farm animal that arrives on site should be mandatory. However, recognition must be made that both genetic and disease testing procedures have significant limitations and shortcomings.

11. Game farm animals harvested or leaving the facility should be tested for disease and parasites before leaving the site.

12. A contingency plan to recapture escaped animals should be prepared by MDFWP in cooperation with the applicant. This plan should include time frames, actions and options.

13. A detailed plan for quarantine facilities and game farm operation should be submitted by the applicant and approved by MDFWP and Department of Livestock prior to licensing.

14. MDFWP should identify holding facilities within the region for confiscated animals and have access to those facilities.

15. Due to current Region 8 staffing of enforcement and wildlife personnel, an increase in personnel services and operations or redirecting of personnel and funds is necessary to ensure adequate monitoring and compliance of this facility.

No Action Alternative: No impact.

3. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

MONTANA CODES ANNOTATED:

1. Unscheduled inspections	87-4-413
2. Informing MDFWP of sale or transport of animals	87-4-415
3. Issuance of annual shooting license	87-4-421
4. Restrictions on importations of certain species	87-4-424
5. Compliance with shooting preserve statutes	87-4-501 - 87-4-528

ADMINISTRATIVE RULES OF MONTANA

1. Fencing requirements	12.6.1503A
2 Game Farm Reporting	12.6.1504A
3. Cloven-hoofed animals as game farm animals	12.6.1506
4. Holding and handling facilities	12.6.1509
5. Quarantine areas required	12.6.1510
6. Licensing limitations (expansion and public review)	12.6.1511
7. Game Farm animal identification: cloven-hoofed ungulates	12.6.1513
8. Transportation	12.6.1514
9. Importation	12.6.1515
10. Duty to report Contagious Diseases	12.6.1516
11. Escaped Game Farm animals	12.6.1517
12. Confiscation procedures	12.6.1518
13. Waiver	12.6.1519

PART III. NARRATIVE EVALUATION AND COMMENT

All narrative evaluations and comments are contained within the body of Section II (Environmental Review).

PART IV. EA CONCLUSION SECTION

1. Based on the significance criteria evaluated in this EA, is an EIS required? YES / [✓ NO]. If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:

An EA was prepared pursuant to ARM 12.2.430(3)(c) because an EA is required when there is not enough time to prepare an EIS. Section 87-4-409(3), imposed a 60 day time limit.

2. Describe the level of public involvement for this project if any and, given the complexity and the seriousness of the environmental issues associated with the proposed action, is the level of public involvement appropriate under the circumstances?

A scoping meeting was held at the Fish, Wildlife, and Parks headquarters in Helena on November 19, 1992. The purpose of the meeting was to share with the public some of the issues that the internal EA preparation team had identified and solicit public input in developing any additional issues/concerns. Written comments were received at the meeting and for a two week period following. Because FWP is subject to the time line prescribed under the game farm statute there was a very short public review period. Due to these constraints it was only possible to allow a fourteen (14) day public response period rather than the usual thirty days. Time constraints made it impossible to host a public meeting to further solicit responses and discuss the EA. Given the complexity and potential seriousness of the environmental issues associated with the proposed action, the level of public involvement allowed through the game farm process was less than optimal

3. Duration of comment period for the Environmental Assessment:

Comment period will be 14 days starting December 15, 1992 and ending December 29, 1992.

4. Name, title, address and phone number of the Person(s) Responsible for Preparing the EA:

Patrick Gubbins, Assistant Region 8 Supervisor, 1400 8th Ave., Helena, Montana 59620; 444-2602
Gayle Joslin, Region 8 Wildlife Biologist, 1404 8th Ave., Helena, MT 59620; 444-4720
Shelley Juvan, Region 8 Office Manager, 1400 8th Ave., Helena, MT 59620; 444-2602
Michael Korn, Landowner Sportsman Coordinator, 1400 8th Ave., Helena, MT 59620; 444-2602
Michael T. Ottman, Region 8 Warden Sergeant, 1404 8th Ave., Helena, MT 59620; 444-4720
Heidi Youmans, Special Projects Coordinator, Wildlife Division,
  1420 E. 6th Ave., Helena, MT 59620; 444-2612

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APPENDIX A

MDFWP LEGAL AUTHORITY TO REGULATE GAME FARMS

STATUTES
STATE OF MONTANA
DEPARTMENT OF
FISH, WILDLIFE,
AND PARKS

GAME FARMS & SHOOTING PRESERVES

Part 4

Game Farms

87-4-401 through 87-4-405. Repealed. Sec. 51, Ch. 570, L. 1983.

Compiler's Comments

Histories of Repealed Sections:

87-4-401. En. Sec. 84, Ch. 173, L. 1917; amd. Sec. 1, Ch. 200, L. 1919; re-en. Sec. 3777, R.C.M. 1921; amd. Sec. 31, Ch. 192, L. 1925; amd. Sec. 1, Ch. 73, L. 1933; re-en. Sec. 3777, R.C.M. 1935; amd. Sec. 1, Ch. 120, L. 1947; amd. Sec. 1, Ch. 43, L. 1967; amd. Sec. 1, Ch. 78, L. 1971; amd. Sec. 13, Ch. 417, L. 1977; R.C.M. 1947, 26-1201(part).

87-4-402. En. Sec. 84, Ch. 173, L. 1917; amd. Sec. 1, Ch. 200, L. 1919; re-en. Sec. 3777, R.C.M. 1921; amd. Sec. 31, Ch. 192, L. 1925; amd. Sec. 1, Ch. 73, L. 1933; re-en. Sec. 3777, R.C.M. 1935; amd. Sec. 1, Ch. 120, L. 1947; amd. Sec. 1, Ch. 43, L. 1967; amd. Sec. 1, Ch. 78, L. 1971; amd. Sec. 13, Ch. 417, L. 1977; R.C.M. 1947, 26-1201(part).

87-4-403. En. Sec. 84, Ch. 173, L. 1917; amd. Sec. 1, Ch. 200, L. 1919; re-en. Sec. 3777, R.C.M. 1921; amd. Sec. 31, Ch. 192, L. 1925; amd. Sec. 1, Ch. 73, L. 1933; re-en. Sec. 3777, R.C.M. 1935; amd. Sec. 1, Ch. 120, L. 1947; amd. Sec. 1, Ch. 43, L. 1967; amd. Sec. 1, Ch. 78, L. 1971; R.C.M. 1947, 26-1201(part); amd. Sec. 2, Ch. 218, L. 1979.

87-4-404. En. Sec. 84, Ch. 173, L. 1917; amd. Sec. 1, Ch. 200, L. 1919; re-en. Sec. 3777, R.C.M. 1921; amd. Sec. 31, Ch. 192, L. 1925; amd. Sec. 1, Ch. 73, L. 1933; re-en. Sec. 3777, R.C.M. 1935; amd. Sec. 1, Ch. 120, L. 1947; amd. Sec. 1, Ch. 43, L. 1967; amd. Sec. 1, Ch. 78, L. 1971; amd. Sec. 13, Ch. 417, L. 1977; R.C.M. 1947, 26-1201(part).

87-4-405. En. Sec. 84, Ch. 173, L. 1917; amd. Sec. 1, Ch. 200, L. 1919; re-en. Sec. 3777, R.C.M. 1921; amd. Sec. 31, Ch. 192, L. 1925; amd. Sec. 1, Ch. 73, L. 1933; re-en. Sec. 3777, R.C.M. 1935; amd. Sec. 1, Ch. 120, L. 1947; amd. Sec. 1, Ch. 43, L. 1967; amd. Sec. 1, Ch. 78, L. 1971; amd. Sec. 13, Ch. 417, L. 1977; R.C.M. 1947, 26-1201(part).

87-4-406. Definitions. As used in this part, the following definitions apply:

(1) "Department" means the department of fish, wildlife, and parks.

(2) "Game animals" means game animals as defined in 87-2-101 that are not the lawful property of any private person.

(3) "Game farm" means the enclosed land area upon which game farm animals may be kept for purposes of obtaining, rearing in captivity, keeping, and selling game animals or parts of game animals, as authorized under this part.

(4) "Game farm animal" means a privately owned caribou, black bear, mountain lion, white-tailed deer, mule deer, elk, moose, antelope, mountain sheep, or mountain goat indigenous to the state of Montana or any other cloven-hoofed ungulate as classified by the department.

(5) "Game farm shooting license" means the license required under 87-4-421 for a game farm operator to hunt the game farm animals indigenous to the state of Montana on his game farm.

(6) "Person" means an individual, firm, corporation, association, or partnership.

History: En. Sec. 1, Ch. 570, L. 1983; amd. Sec. 3, Ch. 540, L. 1985.

87-4-407. License required. No person may operate a game farm in this state without first obtaining a game farm license from the department.

History: En. Sec. 2, Ch. 570, L. 1983.

87-4-408. Department jurisdiction — applicability of livestock laws and rules. (1) The department has primary jurisdiction over game farms.

(2) A game farm licensee must also comply with all applicable laws and rules administered by the department of livestock relating to marking, inspection, transportation, and health.

History: En. Sec. 3, Ch. 570, L. 1983; amd. Sec. 1, Ch. 531, L. 1991.

Compiler's Comments

1991 Amendment: At end of (2) inserted language concerning compliance with laws and rules relating to marketing, inspection, transportation, and health.

87-4-409. Application for license — limitations on issuance. (1) Any person desiring to obtain a game farm license shall make written application to the department. The application shall specify:

(a) the applicant's name;

(b) the applicant's address;

(c) the exact legal description of the land upon which the game farm is to be located, together with the nature of the applicant's title thereto, whether in fee, under lease, by contract for deed, or otherwise;

(d) the species of game animals proposed to be kept or reared on the game farm;

(e) the type of fencing contemplated;

(f) the source from which the applicant intends to acquire the game animals;

(g) if the applicant is not a Montana resident, the name and address of a Montana resident designated by the applicant as his local agent;

(h) if the applicant is a corporation, the full names and addresses of all stockholders owning more than 10% of the stock in the corporation; and

(i) information demonstrating that the applicant is responsible.

(2) A game farm license shall be issued only to a responsible applicant who owns or leases the premises on which the operations are to be conducted and who has properly fenced the land upon which the game farm is to be located. The fencing must be designed and constructed to prevent the escape of the species of game farm animals kept on the land and to prevent the entry of the same species of game animals.

(3) Within 60 days of receiving the application, the department shall notify the applicant of its decision to approve or deny the application. If required fencing has not been completed, the department shall approve the application subject to completion of the fencing. If the application is denied, the department shall specify the reasons for denial.

History: En. Sec. 4, Ch. 570, L. 1983.

87-4-410. Removal of game animals. (1) If game animals are present on the land which is to be covered by a game farm license, the license shall be issued but must be conditioned upon the applicant complying with this section.

(2) Before the fence surrounding any such land may be closed, all game animals must to the extent possible be driven therefrom by the applicant, at the applicant's expense and under the direction of a representative of the department.

(3) If at the time the license is issued all game animals cannot be removed from the licensed land, the applicant and a representative of the department shall decide the approximate number of remaining game animals of each indigenous species. This number is the "base number".

(4) The department may remove the base number of game animals from the game farm by trapping them within 120 days from the date the number was determined.

(5) If the department decides not to remove the game animals or if some game animals were not successfully removed by trapping, the public must be granted access to harvest those game animals during a special hunt set for that purpose during the next regularly scheduled hunting season. All administrative costs incurred by the department in arranging the special hunt or providing for hunting on the applicant's land during the regular season must be reimbursed by the applicant.

(6) After compliance with this section, any animals from the base number that remain and their progeny belong to the licensee, and the licensee may deal with them as provided for in this part.

History: En. Sec. 5, Ch. 570, L. 1983.

87-4-411. License and renewal fees — deposit of fees. (1) The department shall charge an initial game farm license fee of $100 and for each year thereafter shall charge an annual renewal fee of $25.

(2) The fees must be deposited in the state special revenue fund for the use of the department for purposes of this part.

History: En. Sec. 6, Ch. 570, L. 1983; amd. Sec. 48, Ch. 281, L. 1983.

87-4-412. Term of license — nontransferability. (1) A game farm license expires on January 31 of the year succeeding the year of issuance.

Application for renewal must be made before a license expires. The department shall renew the license upon payment of the renewal fee if the licensee has not violated any provisions under which the license was granted.

(2) A game farm license is nontransferable.

History: En. Sec. 7, Ch. 570, L. 1983.

87-4-413. Inspection. (1) Upon receipt of an application for a game farm license, the department shall inspect the land proposed to be covered by the license.

(2) After issuance of a game farm license, the department may inspect the game farm or the licensee's game farm books on a scheduled basis or on such other reasonable basis as may be determined necessary.

History: En. Sec. 8, Ch. 570, L. 1983.

87-4-414. Game farm animals as private property. (1) All game farm animals lawfully raised on a licensed game farm are the private property of the licensee.

(2) The licensee may acquire, breed, grow, keep, pursue, capture, kill, use, sell, or dispose of the game farm animals and their progeny in any quantity, at any time of year, and in any manner, as long as he complies with the requirements of this part.

(3) A licensee shall mark each game farm animal in a manner approved by the department of livestock that facilitates ownership identification of animals for inspection, transportation, reporting, and taxation purposes.

(4) Before allowing hunting of any game farm animals on a game farm, the game farm licensee must obtain a game farm shooting license from the department.

(5) Except for importation permits and health certificates required under 81-2-703, laws applicable to game animals do not apply to game farm animals raised on a licensed game farm.

History: En. Sec. 9, Ch. 570, L. 1983; amd. Sec. 2, Ch. 531, L. 1991.

Compiler's Comments

1991 Amendment: Inserted (3) concerning marking game farm animals to facilitate identification for inspection, transportation, reporting, and taxation purposes; and at beginning of (5) inserted exception clause concerning importation permits and health certificates.

87-4-415. Transportation and sale of game farm animals — quarantine. (1) Whenever the licensee of a licensed game farm sells or disposes of one or more game farm animals, he shall, at the same time, deliver to the recipient or otherwise cause to accompany each game farm animal or animals an invoice or bill of sale signed by the licensee or his agent stating the number of the game farm license, the date of acquisition or disposition, the species, the age, sex, and class of game animals disposed of, and the name and address of the transferee. This invoice or bill of sale, along with any required health certifications, authorizes transportation of the game farm animal or animals being sold, transferred, or disposed of.

(2) Within 10 days after movement or sale, the licensee or his agent shall mail postpaid a duplicate of the invoice or bill of sale to the department of livestock and the department.

(3) The department of livestock may quarantine any game farm animal pending inspection and health certification. The department shall advise the department of livestock regarding the importation or transportation of any game farm animal that the department reasonably believes may be infected with a disease specific to wildlife.

History: En. Sec. 10, Ch. 570, L. 1983; amd. Sec. 3, Ch. 531, L. 1991.

Compiler's Comments

1991 Amendment: In (1), near middle of first sentence before "disposition", inserted "acquisition or" and before "disposed" substituted "age, sex, and class of game animals" for "number" and in second sentence, after "bill of sale", inserted "along with any required health certifications"; at beginning of (2) substituted "Within 10 days after movement or sale" for "Within a reasonable time after disposition"; inserted (3) concerning Department of Livestock quarantining game farm animals pending inspection and concerning notification to Department of Livestock by Department of Fish, Wildlife, and Parks of importation or transportation of game farm animal with wildlife disease; and made minor changes in style.

87-4-416. Sale of game parts, meats, and byproducts. (1) A game farm licensee may sell or otherwise dispose of the carcass, parts, or byproducts of a properly identified game farm animal taken from a game farm, only upon preparing an invoice or bill of sale and attaching a copy of it to the carcass or container and keeping a copy for his records. Upon the attaching of the invoice or bill of sale to the carcass, parts, or byproducts of the game farm animal, the same may be transported within the state to the transferee named on the invoice or bill of sale.

(2) The licensee may sell game farm animals for meat upon compliance with all applicable health laws.

History: En. Sec. 11, Ch. 570, L. 1983.

87-4-417. Records and reporting. (1) Each game farm licensee shall keep and maintain for 3 years accurate written records of all purchases, transfers, and sales of game farm animals showing:

(a) the number of each species of game farm animal purchased by the game farm licensee and from whom purchased;

(b) the number of each species of game farm animal transferred or sold, the date of transfer or sale, and the name and address of the person to whom the transfer or sale was made; and

(c) individual identification of each game farm animal purchased, transferred, or sold.

(2) On or before January 31 of each year, the game farm licensee shall file a report with the director, showing the number and species of game farm animals on hand as of January 1 and the number and species of game farm animals bought or sold during the past year.

History: En. Sec. 12, Ch. 570, L. 1983; amd. Sec. 4, Ch. 531, L. 1991.

Compiler's Comments

1991 Amendment: At beginning of (1)(c), before "identification", inserted "individual".

87-4-418. Unlawful capture. No person may capture, take, or otherwise acquire any game animal in this state for use on a game farm except as provided in 87-4-410.

History: En. Sec. 13, Ch. 570, L. 1983.

87-4-419. Escape from game farm — effect. If a game farm animal escapes from a game farm, the game farm licensee shall immediately notify the department of its escape and shall make every reasonable effort to recapture it. If the escaped animal cannot be recaptured within a reasonable time, it becomes the property of the state.

History: **En. Sec. 14, Ch. 570, L. 1983.**

87-4-420. Taxation. All game farm animals raised on a game farm may be assessed as personal property of the owner.

History: **En. Sec. 15, Ch. 570, L. 1983.**

87-4-421. Game farm shooting license. (1) Before a game farm licensee may hunt any game farm animals indigenous to the state of Montana on his game farm, he must first obtain a game farm shooting license.

(2) The department shall issue to a game farm licensee a game farm shooting license on an annual basis for the number of animals that he wishes to hunt.

(3) The department shall issue individual tags to the game farm licensee at a charge of $15 a tag. The tags must contain such information as the department requires. A tag must be attached to each animal immediately after it is killed and must accompany the animal until it is taken to its final destination.

History: **En. Sec. 16, Ch. 570, L. 1983.**

87-4-422. Rulemaking. (1) The department may adopt and enforce only such rules as are necessary to implement the provisions of this part.

(2) The rules may address but are not limited to classifying of cloven-hoofed ungulates, fencing requirements, reporting requirements, transportation and importation, identification, sale of animal parts, the care and maintenance of game farm animals, and game farm shooting licenses.

History: **En. Sec. 17, Ch. 570, L. 1983.**

87-4-423. Revocation of license — penalty. (1) A game farm license may be revoked for failure to operate the game farm according to the provisions of this part or rules adopted under this part.

(2) Upon discovery of a violation, the department shall give notice of the violation to the licensee, with a statement that the violation must be corrected within 30 days of the notice, unless a longer period is approved by the department.

(3) Upon failure of the licensee to correct the violation, the department may institute revocation proceedings. If the department institutes revocation proceedings, it shall provide reasonable notice and opportunity for a hearing to the licensee. After hearing and upon proof of violation, the department may revoke the game farm license.

(4) In addition to the revocation of a license allowed by this section, a person who violates this part or a rule adopted under this part is subject to a fine of not more than $500 or imprisonment in the county jail for not more than 1 year, or both.

History: **En. Sec. 18, Ch. 570, L. 1983; amd. Sec. 5, Ch. 531, L. 1991.**

Compiler's Comments

1991 Amendment: Near middle of (2), after "statement", deleted "of a specific time in which" and at end, after "corrected", inserted language concerning a 30-day period to correct violation unless Department approves longer period; inserted (4) concerning fine and imprisonment in addition to license revocation for violations; and made minor change in style.

87-4-424. Department restrictions on importation of certain species. The department or the department of livestock may restrict from importation for purposes of game farming any species or subspecies and their hybrids with native species that are determined through scientific investigation to pose a threat to native wildlife or livestock through nonspecific genetic dilution, parasites, or disease.

History: En. Sec. 7, Ch. 531, L. 1991.

Part 5

Shooting Preserves

87-4-501. Authorization for licenses, permits, rules, and regulations. The department is hereby authorized and empowered to issue operating licenses or permits for shooting preserves, which may be privately owned and operated, and to make such rules and regulations as may be necessary and proper in carrying out the purposes of this part.

History: En. Sec. 1, Ch. 265, L. 1965; amd. Sec. 13, Ch. 417, L. 1977; R.C.M. 1947, 26-1601.

87-4-502. Size, location, and posting of preserves. Operating licenses or permits may be issued to any person, partnership, association, or corporation for the operation of shooting preserves that meet the requirements hereinafter prescribed:

(1) Each shooting preserve shall be restricted to not more than 1,280 contiguous acres and shall not be located closer than 10 miles from another preserve and in areas which will not substantially reduce hunting areas available to the public as determined by the department.

(2) The exterior boundaries of each shooting preserve shall be clearly defined and posted with signs erected around the extremity at intervals of 250 feet or less.

History: En. Sec. 2, Ch. 265, L. 1965; amd. Sec. 13, Ch. 417, L. 1977; R.C.M. 1947, 26-1602.

87-4-503. Fees. Fees for shooting preserve licenses or permits shall be $50 per year for the first 160 acres of shooting preserve area, plus $20 per year for each additional 160 acres or parts thereof.

History: En. Sec. 4, Ch. 265, L. 1965; R.C.M. 1947, 26-1604.

87-4-504. Bird license or stamp required. All persons hunting on shooting preserves must have a valid resident or nonresident upland game bird license or a 3-day nonresident shooting preserve bird hunting stamp issued under 87-2-404.

History: **En. Sec. 11, Ch. 265, L. 1965; R.C.M. 1947, 26-1611; amd. Sec. 3, Ch. 105, L. 1987; amd. Sec. 1, Ch. 371, L. 1991.**

Compiler's Comments

1991 Amendment: At end inserted clause relating to 3-day nonresident shooting preserve bird hunting stamp.

87-4-505. Commercial and membership licenses and permits. Each shooting preserve license or permit issued by the department shall designate whether or not the preserve is open to the public on a commercial basis or is restricted to a membership or other limited group. In the latter case, the license or permit shall specify that the area is a restricted shooting preserve. The department shall maintain accurate listings of the names, addresses, and the location of the property of all persons to whom shooting preserve licenses or permits are issued. Said lists shall be made available in their entirety to anyone requesting same and shall specify whether the preserves are public or private.

History: **En. Sec. 12, Ch. 265, L. 1965; amd. Sec. 13, Ch. 417, L. 1977; R.C.M. 1947, 26-1612.**

87-4-506. Revocation of license or permit and reissuance. The department may revoke any shooting preserve license or permit issued under the authority of this part when the licensee has violated any of the provisions of this part or any rule or regulation of the department. After such revocation, a new license or permit may be issued if in the discretion of the department the circumstances so warrant.

History: **En. Sec. 13, Ch. 265, L. 1965; amd. Sec. 13, Ch. 417, L. 1977; R.C.M. 1947, 26-1613.**

87-4-507 through 87-4-520 reserved.

87-4-521. Duration of season. The season established for shooting preserves is the 7-month period beginning September 1 and ending March 31.

History: **En. Sec. 7, Ch. 265, L. 1965; amd. Sec. 13, Ch. 417, L. 1977; R.C.M. 1947, 26-1607; amd. Sec. 2, Ch. 371, L. 1991.**

Compiler's Comments

1991 Amendment: At beginning deleted "In order to give a reasonable opportunity for a fair return on a sizeable investment", after "preserves" deleted "shall be no less than 120 consecutive days, as designated by the department, during", changed season from 4-month to 7-month period, and changed season's end from December to March 31; and made minor changes in style.

87-4-522. Game hunted in preserve. (1) Game which may be hunted under this part shall be confined to artificially propagated pheasants, quail, chukar partridges, turkeys, and such other species as the department may add from time to time.

(2) A minimum number of stock of each species to be hunted on a shooting preserve shall be released on the licensed area during the shooting preserve season. The minimum number of stock of each species to be released shall be determined by the department before the commencement of the season.

History: En. Sec. 3, Ch. 265, L. 1965; amd. Sec. 13, Ch. 417, L. 1977; R.C.M. 1947, 26-1603.

87-4-523. Amount of game recoverable. The operating licenses or permits issued by the department shall entitle holders thereof and their members, guests, or patrons to recover not more than 80% of the total number of each species of game released on the premises each year.

History: En. Sec. 5, Ch. 265, L. 1965; amd. Sec. 13, Ch. 417, L. 1977; R.C.M. 1947, 26-1605.

87-4-524. Preserve operators to establish shooting restrictions. Except for required compliance with the game recovery restriction provided in 87-4-523, shooting preserve operators may establish their own shooting limitations and restrictions on the age, sex, and number of each species that may be taken by each person.

History: En. Sec. 6, Ch. 265, L. 1965; R.C.M. 1947, 26-1606.

87-4-525. Tagging of game. All harvested game shall be tagged with a self-sealing tag prior to being either consumed on the premises or removed therefrom, such tags to remain affixed until the game actually is prepared for consumption. The department shall furnish tags at nominal cost to shooting preserve operators, the tags to be numbered consecutively and dated by year of issuance.

History: En. Sec. 8, Ch. 265, L. 1965; amd. Sec. 13, Ch. 417, L. 1977; R.C.M. 1947, 26-1608.

87-4-526. Registration of shooters. Each shooting preserve operator shall maintain a registration book listing the names, addresses, and hunting license numbers of all shooters; the date on which they hunted; the amount of game and the species taken; and the tag numbers affixed to each carcass. An accurate record likewise must be maintained of the total number, by species, of game raised and/or purchased and the date and number of all species released. These records shall be open to inspection by a delegated representative of the department at any reasonable time and shall be the basis upon which the game-recovery limits in 87-4-523 shall be determined.

History: En. Sec. 9, Ch. 265, L. 1965; amd. Sec. 13, Ch. 417, L. 1977; R.C.M. 1947, 26-1609.

87-4-527. Wild game on preserve. Any wild game found on shooting preserves may be harvested in accordance with applicable license, game, and hunting laws pertaining to open seasons, bag and possession limits, and rules, as are established regularly by the department and the U.S. fish and wildlife service.

History: En. Sec. 10, Ch. 265, L. 1965; amd. Sec. 13, Ch. 417, L. 1977; R.C.M. 1947, 26-1610; amd. Sec. 3, Ch. 371, L. 1991.

Compiler's Comments

1991 Amendment: Near beginning, after "applicable", inserted "license"; and made minor changes in style.

87-4-528. Unscheduled inspections by department. The department shall conduct unscheduled inspections of all shooting preserves licensed under this part to ensure that pertinent statutes as well as the rules and regulations of the department are being followed and obeyed.

History: **En. Sec. 14, Ch. 265, L. 1965; amd. Sec. 13, Ch. 417, L. 1977; R.C.M. 1947, 26-1614.**

Sub-Chapter 15

Game Farms

12.6.1501 APPLICATION FOR AND RENEWAL OF GAME FARM LICENSE (1) Application for a game farm license shall be made in writing on a form prescribed by the department of fish, wildlife, and parks.

(2) The applicant shall include a $100 license fee with the initial application.

(3) A game farm license may be renewed prior to January 31 upon payment of a fee of $25.

(4) All game farm licenses expire on January 31 following the date of issuance.

(5) A game farm operator whose license has expired for more than one year will be considered a new applicant and pay the $100 initial application fee accompanied by an initial application form.

(6) The department may not renew a game farm license until the licensee has submitted the report described by section 87-4-417, MCA.

(7) If a person is issued more than one license under sections 87-4-406 through 87-4-423, sections 87-4-901 through 87-4-916, and sections 87-4-1001 through 87-4-1013, MCA, the total assessment for initial fees or for renewal fees for all licenses issued to such person may not exceed the amount of the largest individual license fee.

(8) No initial license fee shall be assessed against any person who held a game farm license on October 1983, unless there is a break in licensing of more than one year. (History: Sec. 87-4-422 MCA; IMP, Sec. 87-4-416 MCA; NEW, 1984 MAR p. 250, Eff. 1/27/84.)

12.6.1502 PURCHASE AND SALE OF GAME (IS HEREBY REPEALED) (History: Sec. 87-4-422 MCA; IMP, Sec. 87-4-416 MCA; NEW, 1984 MAR p. 250, Eff. 1/27/84; REP, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1502A BILL OF SALE/TRANSPORTATION (1) Game farm animals to be moved, transferred, bought or sold must be inspected by a department of livestock brand inspector prior to the transaction.

(2) The four copies of the bill of sale/transportation completed upon inspection of game farm animals must be dispensed as follows:

(a) original to the department of livestock;

(b) second copy to department of fish, wildlife, and parks;

(c) third copy to purchaser or transferee, which must also accompany the animals to their destination; and

(d) fourth copy retained by the game farm operator at origin.

(3) The licensee must account for all bill of sale/transportation receipts.

(4) Transactions must be recorded in the record book(s) of the affected game farm licensee(s) within five days of the transaction. (History: Secs. 81-3-202, 87-4-422 MCA; IMP, Secs. 87-4-415, 81-3-210, 87-4-422 MCA; NEW, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1503 FENCING REQUIREMENTS (IS HEREBY REPEALED) (History: Sec. 87-4-422 MCA; IMP, Sec. 87-4-416 MCA; NEW, 1984 MAR p. 250, Eff. 1/27/84; REP, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1503A FENCING REQUIREMENTS (1) After May 15, 1992, applicants for a game farm license must comply with the following fencing standards:

(a) Conventional perimeter fences must be, at a minimum, eight feet above ground level for their entire length. The bottom six feet must be mesh of sufficient size to prevent wild animals from entering and game farm animals from escaping. Supplemental wire required to attain a height of 8 feet may be smooth, barbed, or woven wire (at least 12 1/2 gauge) with strands spaced not more than six inches apart.

(b) Perimeter fences constructed of high tensile wire must be supported by a post or a stay at minimum intervals of 8 feet.

(c) Conventional perimeter fences must be at least 12 1/2 gauge woven wire, 14 1/2 gauge high-tensile woven wire, chain link, non-climbable woven fence, or other fence approved by the department of fish, wildlife, and parks.

(i) If the wire used is not a full 8 feet in height, it must be overlapped one row and securely fastened at every other vertical row or woven together with cable.

(d) Electric fencing materials may be used on perimeter fences only as a supplement to conventional fencing materials.

(e) All gates in the perimeter fence must be self-closing, equipped with two locking devices and installed in locations that have been approved by the department of fish, wildlife, and parks. Double gates may be required at points in the perimeter fence subject to frequent vehicle traffic that is not related to operation of the game farm.

(f) Posts used in the perimeter fence must be:

(i) of material of sufficient strength to keep game farm animals securely contained and wild animals from entering;

(ii) extended at least 8 feet above ground level;

(iii) spaced no more than 24 feet apart with stays or supports at 8 foot intervals between the posts;

(iv) braced with wood or with suitable metal material properly set in concrete, at all corners.

(2) Game farm perimeter fences in place as of May 15, 1992 that comply with the previously existing 7 1/2 foot height requirement and have been found to be adequate are not subject to the requirements of this rule (1)(a) through (f).

(a) If fences do not comply with the previously existing 7 1/2 foot height requirement or when reconstruction or replacement of existing 7 1/2 perimeter fences becomes necessary, they shall be constructed to meet the fencing standards outlined in (1).

(3) All open topped enclosures holding game farm carnivores must meet the following requirements:

(a) a perimeter fence at least 8 feet in height constructed of at least 9 gauge woven wire chain link or solid material that cannot be destroyed by the species contained therein;

(b) the perimeter barrier must be supported by a post or a stay at 10 foot intervals;

(c) an overhang of barbed wire or electric wire installed at the top of the perimeter fence or other configuration that precludes escape;

(d) buried mesh wire (minimum 11 gauge) extending laterally 3 feet to the inside of the enclosure for the length of the perimeter fence (to prevent carnivores from digging under the fence and escaping);

(e) any trees or obstacles that would allow carnivores to exit or enter the enclosure must be removed.

(4) All cages holding game farm carnivores must be of sufficient size (height, length and width) to prevent overcrowding and allow exercise and must meet the following requirements:

(a) a cage top constructed of at least 11 gauge woven wire or chain link;

(b) a floor made of cement or concrete at least 3 inches thick into which metal fence posts are permanently secured or a floor that consists of chain link or similar material that will preclude the animal digging through the floor to escape.

(5) Gates on carnivore enclosures and cages must be self-closing and have double locks.

(6) Gates are prohibited in fences that are shared in common by neighboring game farms.

(7) The fence must be maintained in a game-proof condition at all times to prevent animals from escaping from or entering the game farm premises. If game farm animals or wild animals do pass through, under, or over the fence for any reason, the licensee must supplement the fence to prevent continued passage. (History: Sec. 87-4-422 MCA; IMP, Secs. 87-4-409, 87-4-422 MCA; NEW, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1504 REPORTING (IS HEREBY REPEALED) (History: Sec. 87-4-422 MCA; IMP, Sec. 87-4-416 MCA; NEW, 1984 MAR p. 250, Eff. 1/27/84; REP, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1504A GAME FARM REPORTING (1) Reports must be recorded on the forms provided by the department of fish, wildlife, and parks and must be filled out completely and accurately.

(2) No pages in the game farm record book may be discarded. Voided pages must be sent to the department of fish, wildlife, and parks (Helena office).

(3) The annual game farm report must be submitted to the department of fish, wildlife, and parks (Helena office) by January 31.

(4) Renewal of a game farm license is contingent upon timely and accurate completion and submittal of required reports.

(5) Game farm record books and reports must be kept on the premises of the licensed game farm, residence of the game farm operator or manager or his/her principal place of business, so long as that location is within the state of Montana. The designated location of the game farm record books and reports must be declared to the department of fish, wildlife, and parks (Helena office).

(6) Purchases, sales, escapes, recaptures, deaths and births must be reported in the game farm record book provided by the department of fish, wildlife, and parks.

(7) Game farm operators are requested to notify the department of fish, wildlife, and parks (regional warden captain), in advance of his/her annual animal census. (History: Sec. 87-4-422 MCA; IMP, Secs. 87-4-417, 87-4-422 MCA; NEW, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1505 RECOVERY OF ESCAPED ANIMALS (IS HEREBY REPEALED) (History: Sec. 87-4-422 MCA; IMP, Sec. 87-4-416 MCA; NEW, 1984 MAR p. 250, Eff. 1/27/84; REP, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1506 CLOVEN-HOOFED ANIMALS AS GAME FARM ANIMALS (1) All animals of the order Artiodactyla, except the families suidae, camelidae, and hippopotamidae, are game farm animals under the definition described in section 87-4-406(4), MCA, provided that the following animals in the families suidae and bovidae are not considered game farm animals under section 87-4-406(4), MCA: domestic pigs, domestic cows and yaks, domestic sheep, domestic goats which are not naturally occurring in the wild in its country of origin, and bison. (History: Sec. 87-4-422 MCA; IMP, Sec. 87-4-416 MCA; NEW, 1984 MAR p. 250, Eff. 1/27/84; AMD, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1507 DEFINITIONS (1) "Bill of sale/transportation" is a form utilized by brand inspectors of the department of livestock to document sale and movement of game farm animals.

(2) "Conventional fence" is the woven or welded wire fence used to enclose game farm animals.

(3) "Disease, communicable" means a disease that can spread from one animal to another or to humans.

(4) "Disease, dangerous" means a disease that can cause catastrophic animal loss or risk to human health.

(5) "Domestic" means those populations of animals which through long association with humans have been selectively bred to a degree that has resulted in genetic changes affecting the coloration, temperament, conformation or other attributes of the species to an extent that makes them unique and distinguishable from wild individuals of their species.

(6) "Game farm" means the enclosed land area upon which game farm animals may be kept. 87-4-406 (3), MCA.

(7) "Handling facility" means an enclosure that includes an animal restraining device (such as a squeeze chute) to facilitate inspection and handling of individual game farm animals.

(8) "High tensile fence" means a fence eight feet above ground composed of wire capable of maximum stretching.

(9) "Holding facility" means a fenced enclosure (used in conjunction with the handling facility) to hold game farm animals for individual inspection, marking or treatment.

(10) "Hybrid" means an animal produced from a mating between two animals of different species or subspecies.

(11) "Immediate" means without delay.

(12) "Mingling" means mixing game farm animals together with other animals.

(13) "Quarantine area" means an approved enclosure (separate from the holding and handling facilities) used to isolate newly acquired or diseased game farm animals.

(14) "Prohibited game farm animals" means animals that are prohibited from importation for purposes of game farming pursuant to section 87-4-424, MCA.

(15) "Restricted game farm animals" means animal species subject to specific importation restrictions. (History: Secs. 81-1-102, 81-3-202, 87-4-422 MCA; IMP, Secs. 81-3-210, 81-2-102, 87-4-415, 87-4-422 MCA; NEW, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1508 GAME FARM DESCRIPTION (1) A game farm operator must provide a scaled drawing or map of the proposed exterior boundary, holding and handling facilities, location of quarantine area, and proposed location of all gates, at the time of application for a game farm license. (History: Sec. 87-4-422, MCA; IMP, Sec. 87-4-409 MCA; NEW, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1509 HOLDING AND HANDLING FACILITIES (1) All game farm operators must have holding and handling facilities that enable handling, marking and individual identification of all game farm animals on the premises. A permanent or portable handling facility must be on the game farm at all times. (History: Secs. 87-4-422, 81-1-102, 81-3-202 MCA; IMP, Sec. 87-4-406, 87-4-409, 81-3-203 MCA; NEW, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1510 QUARANTINE AREA (1) Every game farm must have an approved quarantine facility within its exterior boundary or submit an action plan to the department of livestock that guarantees access to an approved quarantine facility within the state of Montana.

(a) An approved quarantine facility is one that meets criteria set by the state veterinarian of the department of livestock.

(b) The quarantine area must meet the tests of isolation, separate feed and water, escape security, and allowances for the humane holding and care of its occupants for extended periods of time.

(2) Should the imposition of a quarantine become necessary, the game farm owner must provide an on-site quarantine facility or make arrangements at his or her own expense to transport the animals to the approved quarantine facility named in the quarantine action plan. (History: Sec. 81-2-103 MCA; IMP, Sec. 81-2-102 MCA; NEW, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1511 LICENSING LIMITATION (1) Expansion of existing game farm facilities (construction of buildings or new pastures) outside the confines of a currently approved perimeter fence must be approved by the department of fish, wildlife, and parks prior to use for any game farm activity.

(2) Game farm license applications or expansions are subject to public notification and a public comment process prior to a decision on the application. (History: Sec. 87-4-422 MCA; IMP, Secs. 87-4-409, 87-4-424 MCA; NEW, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1512 NEW SPECIES (1) To add a new game farm animal species to an existing game farm, the licensee must submit a new application listing the species desired. The new species may not be acquired or possessed until the department approves the new application, and inspects and approves the facility for occupancy by the new species.

(2) The game farm licensee must obtain, purchase, board, or lease game farm animals from properly licensed or legal sources. (History: Sec. 87-4-422, MCA; IMP, Sec. 87-4-409 MCA; NEW, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1513 GAME FARM ANIMAL IDENTIFICATION: CLOVEN HOOFED UNGULATES (1) Game farm animals owned by or transferred to any game farm within the state of Montana must be individually identified by the method prescribed by the department of fish, wildlife, and parks and the department of livestock.

(2) Every game farm animal must be marked with a tattoo registered to the game farm licensee (original owner) by the department of livestock. The tattoo must be placed on the left ear of the animal.

(3) Every game farm animal must in addition be marked with an ear tag issued by the department of fish, wildlife, and parks. Ear tags must be placed in a location specified by the department of fish, wildlife, and parks.

(4) Tags or identification numbers must be requested from the department of fish, wildlife, and parks, enforcement division, Helena 444-2452, during business hours. Licensee must state the number and sex of animals to be marked. A department of fish, wildlife and parks representative will deliver the tags/identification to the game farm operator.

(5) Game farms that maintain animals for the primary purpose of photography or filming have the option of using another form of individual identification as an alternative to the designated ear tag. The proposed manner in which such animals will be individually identified must be submitted by the owner to the department of fish, wildlife, and parks for approval.

(6) When loss of an animal identification tag is discovered, the licensee must notify the department of fish, wildlife, and parks immediately. The animal must be re-tagged with approved identification as soon as possible; but in no case later than January 31 of the year following the loss.

(7) Identification assigned to an individual game farm animal may not be transferred to any other animal.

(8) Any individual identification marker issued by the department of fish, wildlife, and parks that is found to have become detached from the animal for which it was issued must be returned to the department of fish, wildlife, and parks (Helena office) immediately.

(9) All newborn game farm animals must be individually marked by October 1 or prior to removal of the animal from the game farm premises, whichever is earlier.

(a) Carnivores must be identified with the proper tattooing method as required by 87-1-231, MCA, ARM Rules 12.6.1901 et seq. Tattoo numbers must be requested from the department, enforcement division, Helena, 444-2452, during business hours.

(10) Game farm animals acquired from another state/province must be marked with a Montana ear tag within 30 days of importation. (History: Secs. 81-3-202, 87-4-422 MCA; IMP, Secs. 81-3-203, 87-4-414, 87-4-415, 87-4-422 MCA; NEW, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1514 TRANSPORTATION (1) Game farm licensee must verbally notify the department of livestock prior to import, transport, transfer or disposal of any game farm animal.

(2) The third copy (to purchaser or transferee) of the bill of sale/transportation must accompany the import, transport, transfer or disposal of game farm animals (both live and dead).

(3) Game farm animals may be transported from out of state through Montana if:

(a) animals proceed directly through Montana with no intent to unload;

(b) an official health certificate is obtained from the state of origin to show destination, origin, and proof of ownership of any game farm animals being transported;

(c) animals are not sold, bartered, traded, or otherwise transferred while in the state. (Transfer does not include moving animals to another transport vehicle);

(d) in emergencies, game farm animals in transit are unloaded and temporarily held with prior approval and in compliance with quarantine rules promulgated by the department of fish, wildlife, and parks and the department of livestock.

(4) All game farm animals transported within the state must be marked with identification approved by the department of fish, wildlife, and parks and the department of livestock, and accompanied by a copy of the bill of sale and tattoo inspection certificate.

(5) Game farm animal gametes (ova & semen) must be handled, purchased, sold or transferred under the same rules and laws as game farm animals. (History: Secs. 81-3-202, 81-2-707, 87-4-422 MCA; IMP, Secs. 81-3-203, 81-3-210, 81-2-703, 87-4-415, 87-4-422 MCA; NEW, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1515 IMPORTATION (1) A game farm licensee may import animals into Montana only after obtaining the following:

(a) an importation permit from the animal health division, department of livestock, 406-444-2976;

(b) a game farm license from the department of fish, wildlife, and parks that is valid for the species to be imported;

(c) an examination by an accredited veterinarian accompanied by an approved health certificate. Minimum specific disease test results and health statements that must be included on a health certificate for game farm animal(s) include:

(i) all game farm animals in the shipment tested negative for tuberculosis, brucellosis and other diseases as prescribed by the department of livestock and

(ii) the following statement signed by an accredited veterinarian in the state/province of origin: "To the best of my knowledge, animals listed herein are not infected with paratuberculosis (Johnes Disease) and have not been exposed to animals infected with paratuberculosis. To the best of my knowledge, the premises of origin have not been the site of a significant disease outbreak in the previous 24 months that was not contained and extirpated using recognized disease control standards."

(2) Additional disease testing may be required by written notification from the department of fish, wildlife, and parks or the state veterinarian prior to importation if there is reason to believe other diseases, parasites or other health risks are present (i.e. a recent outbreak of a disease not listed in this section).

(3) All elk (*Cervus elaphus*) must be tested prior to importation for evidence of red deer hybridization. Any animal testing positive for red deer hybridization shall not

be brought into the state. Any health certificate required by Title 81, chapter 2, MCA, to accompany imported elk found to be negative for red deer hybridization must include a certification by an accredited veterinarian that every elk in the shipment has tested negative for red deer hybridization.

(4) Imported animals must be isolated from other animals at an approved quarantine facility for at least 30 consecutive days after entry into the state.

(5) The department of fish, wildlife, and parks finds that the following species, hybrids, or viable gametes (ova and semen), are detrimental to existing wildlife and their habitats through genetic dilution, parasites, disease, habitat degradation or competition. Possession of the following prohibited species, hybrids or viable gametes is prohibited except as authorized by the department of fish, wildlife, and parks in writing:

(a) In the family Bovidae, all members of the following genera and hybrids thereof:

Subfamily Caprinae
- Rudicapra (chamois)
- Hemitragus (tahr)
- Capra (goats, ibexes--except domestic goat, Capra hircus)
- Ammotragus (Barbary sheep or Aoudad)
- Ovis (only the mouflon species, Ovis musimon)

Subfamily Hippotraginae
- Oryx (oryx and gemsbok)
- Addax (addax)

Subfamily Reduncinae
- Redunca (reedbucks)

Subfamily Alcelaphnae
- Connochaetes (wildebeests)
- Alcelaphus (hartebeests)
- Damaliscus (sassabies: blesbok, bontebok, topi)

(b) In the family Cervidae, all of the following species and hybrids thereof:

Moose (Alces alces)

All red deer (Cervus elaphus elaphus), and all hybrids with North American elk (C. elaphus canadensis, roosevelti, manitobensis, nannodes and nelsoni).

Axis deer (Axis axis)
Rusa deer (Cervus timorensis)
Sambar deer (Cervus unicolor
Sika deer (Cervus nippon)
Roe deer (Capreolus capreolus and Capreolus pygarus)

(c) All wild species in the family Suidae (Russian boar, European boar) and hybrids thereof.

(d) In the family Tayassuidae, the collared peccary (javelina) (Tayassu tajacu) and hybrids thereof.

(6) These prohibited species may not be bred, released, imported, transported, sold, bartered or traded within the state except as authorized in writing by the department of fish, wildlife, and parks. The prohibited animals may be transported out of the state in compliance with the game farm rules of the receiving state and federal laws.

(7) Persons with proof of possession prior to effective date of these rules may possess prohibited species for the life of the animals.

(8) The departments of fish, wildlife, and parks and livestock have designated the following game farm animals as "restricted species", on the basis of specific animal health risks that they pose to wildlife and/or domestic livestock: white-tailed deer (Odocoileus virginianus) and reindeer (caribou) (Rangifer sp.).

(a) Importation of white-tailed deer into Montana is allowed only for game farms currently licensed for white-tailed deer and which currently legally possess white-tailed deer. The only white-tailed deer that may be permitted entry are those originating from states west of the 100th meridian where meningeal worm is not endemic and which meet the following criteria:

(i) All animals in the shipment are certified free of meningeal worm parasites and dorsal spined larvae as determined by the currently recognized Baerman fecal flotation protocol whereby fecal samples are collected from each animal in the shipment at 30 day intervals for a total of six samplings per animal while the shipment is held in strict 180 day isolation at origin in the absence of any anthelmintic therapy; and the fecal samples are analyzed for dorsal spined larvae at an approved laboratory promptly after each collection. If any animal in the shipment is found positive on any of the six tests the entire shipment shall be rejected for importation; or

(ii) All animals in the shipment are certified free of meningeal worm parasites and dorsal spined larvae using new technology recognized capable of certifying cervids free of meningeal worm.

(b) Importation of reindeer (Rangifer sp.) into Montana is prohibited except under the following conditions:

(i) All animals in the shipment originate in a herd located south of the Canada/U.S. border that is certified brucellosis (B. suis and B. abortus) and tuberculosis free as determined by whole herd testing; and

(ii) The destination of these animals is not located west of the continental divide.

(9) Reclassification of any species listed as prohibited in part (5) or restricted in part (8) is contingent on compelling scientific information indicating that risks posed by these species to native wildlife populations and/or domestic livestock can be eliminated or managed effectively through application of new diagnostic or management technologies.

(10) Any diseased, prohibited or restricted animal determined by the department of fish, wildlife, and parks or state veterinarian to pose a significant threat to the state's wildlife resources, domestic animals or human health may be destroyed or held in quarantine at the owner's expense until disposition is determined. Possession or transfer of such animals is prohibited if contrary to the determination of department of fish, wildlife, and parks or department of livestock. (History: Secs. 81-2-707, 87-4-422 MCA; IMP, Secs. 81-2-703, 87-4-415, 87-4-422, 87-4-424 MCA; NEW, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1516 DUTY TO REPORT CONTAGIOUS DISEASES (1) Any person, including a game farm licensee who has reason to believe that game farm animals have or have been exposed to a dangerous or communicable disease, must give notice to the department of livestock immediately.

(2) The department of livestock will determine when destruction of animals, a quarantine or disinfection is required at any commercial game farm. If the department of livestock determines that destruction, quarantine or disinfection is required, a written order will be issued to the licensee describing the procedure to be followed. Required disinfection of holding facilities must be completed at the owner's expense. If the owner disagrees with the department's determination, he or she has the right to appeal the decision to the board of livestock, provided notice of such appeal is given within 48 hours of receipt of the order. (History: Sec. 81-2-103 MCA; IMP, Sec. 81-2-107 MCA; NEW, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1517 ESCAPED GAME FARM ANIMALS (1) The department or any peace officer may seize, capture, or destroy game farm animals that have escaped the possessor's control, and which are determined to be detrimental to native wildlife, habitat or other wildlife resources by threat of predation, spread of disease or parasites, habitat competition, interbreeding with native wildlife, or other significant damage.

(2) Escapes must be reported immediately to the department of fish, wildlife and parks.

(3) The licensee must recapture or destroy the animals within ten days.

(4) If the licensee is unable to recapture the animals within ten days, the department of fish, wildlife and parks may destroy them.

(5) The licensee must notify the department of fish, wildlife and parks immediately of the recapture or death of an escaped animal.

(6) The department of fish, wildlife, and parks may inspect a recaptured animal before it is returned to the game farm. (History: Sec. 87-4-422, MCA; IMP, Sec. 87-4-419 MCA; NEW, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1518 CONFISCATION PROCEDURES (1) The department of fish, wildlife, and parks may confiscate or seize any unlawfully possessed game farm animals.

(2) The costs of any confiscations or seizures of game farm animals may be charged to the owner of the animals.

(3) Any game farm licensee whose license is revoked must lawfully dispose of game farm animals in his or her possession within a period designated by the department of fish, wildlife, and parks. Failure to comply with this time limit will result in confiscation of the game farm animals by the department and/or citations for criminal conduct. (History: Sec. 87-4-422 MCA; IMP, Secs. 87-4-418, 87-4-424, 87-4-422, 87-4-423 MCA; NEW, 1992 MAR p. 1017, Eff. 5/15/92.)

12.6.1519 WAIVER (1) The departments may waive any rule they find will constitute an undue hardship to an individual game farm operator. A game farm operator wishing to receive a waiver of any rule must make application to both departments, stating with specificity why he or she has a compelling need to have a rule waived and showing that the grant of a waiver will not threaten or adversely affect any domestic or wild animal. The departments, in their discretion, may waive any rule. (History: Secs. 81-2-102, 81-3-202, 87-4-415, 87-4-422 MCA; IMP, Secs. 81-3-210, 81-2-102, 87-4-422 MCA; NEW, 1992 MAR p. 1017, Eff. 5/15/92.)

NEXT PAGE IS 12-345

APPENDIX B

LEGAL DESCRIPTION OF GAME FARM (BUY/SELL AGREEMENT)

- LEGAL
- GAME
- GAME FARM APPLICATION
- BUSINESS PLAN FOR GAME FARM

Fee: $100 ? Transfer or new?

Rev. 1-1-84

Form FG-11.1

STATE OF MONTANA

DEPARTMENT OF FISH, WILDLIFE, AND PARKS

APPLICATION FOR GAME FARM LICENSE & Shooting preserve

Name Jerry L. Christison
(Company or Corporation)

Address 6941 N. Montana
Helena, mt 59601

If nonresident, name and address of resident Montana agent

If a corporation, full name and address of all stockholders owning 10 percent or more stock:

(Use additional sheets if necessary)

Exact legal description of the land on which the game farm is to be located:
See attached –

County Lewis & Clark

Above described property is legally under my control via: Fee Title buy-sell

Contract for Deed X Lease [illegible] ?? Other

Species of animals to be kept or reared on proposed game farm: Elk & Deer white tail & mule

Name and address of the source from which applicant will acquire game farm animals Presently own Elk [illegible] ??

Has above described property been fenced to prevent public game animals from mixing with game farm animals? Not yet Attach Diagram of fencing.

Are any game animals present on the enclosed lands for which the license will be issued? NO Species and number

I have answered correctly all questions to the best of my ability.

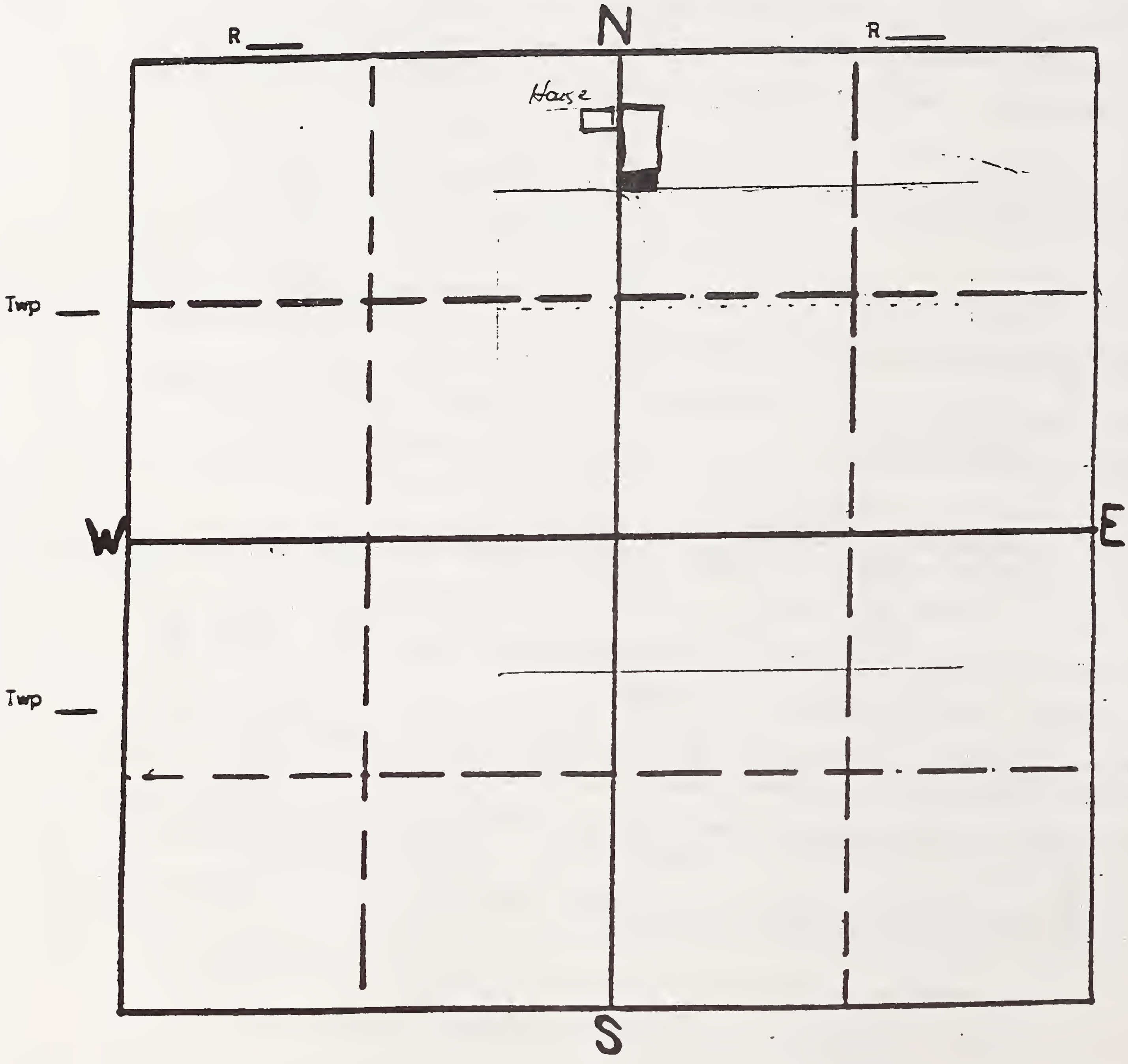
8-13-92
Date

Applicant Signature

■ Barn & Handling facility
— Perimiter fence
━ Quarintine facility
- - · · possible Cross fencing

Scale 1" = ____________

Large square represents ______100 Acres ~~sections~~)



Draw in location of game farm to scale on lands owned or leased by applicant. Fill in legal subdivision, Section number, Township and Range.

Give exact acreage contained within pen.

REALTOR®

AGREEMENT TO SELL AND PURCHASE
(Including Earnest Money Receipt)

This contract stipulates the terms of sale of this property. Read carefully before signing (including information of reverse side). This is a legally binding contract. If not understood, seek competent advice.

HELENA, Montana, SEPT 1, 19 92

JERRY L. CHRISTISON & GENEVIEVE R. CHRISTISON

(hereinafter called "Buyer") agrees to purchase, and the undersigned Seller agrees to sell the following described real estate hereinafter referred to as "premises" commonly known as 1230 GRIZZLY GULCH in the City of ______, County of LEWIS & CLARK, Montana, legally described as SEE ATTACHED A; B

TOGETHER WITH all fixtures attached to the above described real property and attached buildings or structures except: PORTABLE STORAGE SHED

SMOKE DETECTOR(s): Property has # ONE None ______ smoke detector(s).

The following items of personal property, free of liens and without warranty of condition, are included: SATELITE DISH SYSTEM; 1 STOCK TANK (METAL) AND 1 ELECTRIC STOCK WATER TANK; REFRIGERATOR AND ATTACHED KITCHEN APPLIANCES.

RECEIPT FOR EARNEST MONEY: The undersigned sales representative hereby acknowledges receipt from Buyer of earnest money in the amount of [redacted]

[redacted] U.S. Dollars [redacted] as evidenced by ( ) cash, (X) check, or ( ) ______

All parties to this transaction agree that such funds will be held in a depository account by JOHN R. WOOLSEY, Broker and ~~deposited pursuant to Montana State Law~~. Parties agree that interest accruing on earnest money, if any, while deposited shall be payable to JOHN R WOOLSEY. If interest is payable to the broker it is agreed that sums so paid are consideration for services rendered g/v

______ By. ______
(Selling Real Estate Firm) (Sales Representative)

JRC
SW

TOTAL PURCHASE PRICE IS: [redacted] U.S. Dollars

($ [redacted]) payable as follows:

$ [redacted] earnest money to be applied at closing

$ [redacted] as additional cash down payment, payable on or before closing.

$ [redacted] balance of the purchase price will be paid as follows: BALANCE to be PAID AT TIME OF CLOSING

SPECIAL PROVISIONS: SALE CONTINGENT ON SALE OF BUYERS HOME AT 6941 No. MONTANA AVE. - (Helena) ANY SURVEY TO BE AT EXPENSE OF BUYER. SALE SUBJECT TO WELL-TEST FOR WATERS' PURITY. SELLER WILL HAVE ELECTRICAL UPDATED AT METER BASE AND INTO HOUSE. SELLER WILL HAVE CEMENT POURED ABUTTING NORTH WALL AND RESEAL WEST WALL TO STRENGTHEN MOISTURE BARRIER IN BASEMENT. SELLER WILL HAVE CEILING DAMAGE REPAIRED IN KITCHEN. SELLER TO REPLACE SMALL DOOR IN GARAGE & SLIDING DOOR IN BASEMENT. Subject To Buyer obtaining financing

Addendum(s) : # ______ None ______

DISCOUNT POINTS: If a Buyer obtains financing from a lender requiring discount points, Seller agrees to pay discount points up to a maximum of -0- percent (____%) of the Buyer's loan. Buyer shall pay all other discount points ______

CONVEYANCE: The Seller shall convey the real property by WARRANTY Deed, free of all liens and encumbrances except those described in the title insurance section of this agreement. The Seller shall convey the personal property by bill of sale.

TITLE INSURANCE: Seller, at Seller's expense, shall furnish Buyer Title Insurance evidenced by a standard form American Land Title Association title Insurance commitment in amount equal to the purchase price, committing to insure merchantable title to the real property in the Buyer's name, free and clear of all liens and encumbrances except: encumbrances hereinabove mentioned, zoning ordinances, building and use restrictions, reservations in federal patents, beneficial utility easements apparent or of record, easements of record, Special Improvement Districts (including rural SIDs), if any, which will be:

☒ paid off by seller at closing ☐ assumed by buyer at closing, and ______

If the Seller's title is not merchantable and cannot be made merchantable before the stated closing date, 30 ADDITIONAL DAYS SHALL BE ALLOWED FOR THE SELLER TO MAKE SUCH TITLE MERCHANTABLE. Encumbrances to be discharged by the Seller shall be satisfied prior to closing or from Seller's proceeds at time of closing

TAXES AND ASSESSMENTS: Seller and Buyer agree to prorate taxes, special improvement assessments for the current tax year, as well as pre-paid rents, if any, as of the date of closing, unless otherwise agreed ______

CLOSING DATE: The date of closing shall be NOVEMBER 15, 19 92. The parties may, by mutual agreement, agree to close the transaction at any time prior to the date specified. If third party financing is required by the terms of this agreement (includes assumptions, contracts for deeds, and lender financing), the closing shall occur on the date specified or as soon thereafter as financing is complete but no later than 30 days after the stated closing date. The Buyer and Seller will deposit with the closing agent all instruments and monies necessary to complete the purchase in accordance with this agreement. If Buyer fails to make written application for financing, apply for assumption of an existing loan or contract, or initiate any action required for completion of a contract for deed by 5:00 p.m. (mountain time) NOVEMBER 15, 19 92, Buyer will be in breach and Seller can exercise Seller's remedies under this agreement. If financing is called for herein and cannot be obtained, it is agreed that the earnest money will be returned to the buyer.

F.H.A. BUYER: The appraised value of the property being purchased, for mortgage insurance purposes, must not be less than ______ ($ ______). Please refer to this section on the reverse of this form for additional disclosures of your rights.

ADDITIONAL TERMS THAT ARE AN INTEGRAL PART OF THIS AGREEMENT ARE PRINTED ON THE REVERSE OF THIS FORM. PLEASE READ THE REVERSE SIDE OF THIS FORM, AS THESE TERMS WILL AFFECT YOUR RIGHTS AND RESPONSIBILITIES UNDER THIS AGREEMENT.

SALESPERSON'S REPRESENTATION: Buyer hereby acknowledges that the above identified sales representative has acted and continues to act through closing as representative and agent for the Seller, and not as representative and agent for the Buyer.

BUYER'S ACKNOWLEDGEMENT: Buyer acknowledges that he has examined the real and personal property, that Buyer enters into this agreement in full reliance upon his independent investigation and judgement, that prior verbal representations by the Seller or Seller's agents or representatives do not modify or affect this agreement, and that by signing this agreement Buyer acknowledges having read and understood this entire agreement, including the terms printed on the reverse page of this document.

BUYER'S COMMITMENT: I/We agree to purchase the above described property on the terms and conditions set forth in the above offer and grant to said sales representative until ______, 19____ at ______ am/pm to secure Seller's written acceptance. Buyer may withdraw this offer at any time prior to seller's written acceptance. If Seller has not accepted by the time specified, this offer is automatically withdrawn.

I/WE HEREBY ACKNOWLEDGE receipt of a copy of this RECEIPT AND AGREEMENT TO SELL AND PURCHASE bearing my/our signature(s).

Buyer's Address: ______ Buyer Signature: ______
Phone: ______ Buyer Signature: Genevieve R. Christison

SELLER'S COMMITMENT: I/We agree to sell and convey to Buyer the above described property on the terms and conditions hereinabove stated. I/We acknowledge receipt of copy of this agreement bearing my/our signature(s) and that of the Buyer named above. Dated this 1 day of Sept, 19 92.

Seller's Address 1230 GRIZZLY GULCH Seller Signature: John R Woolsey
Phone: (406) 442-6718 Seller Signature: ______

DELIVERY TO BUYER OF A COPY OF ACCEPTED OFFER (one of the following methods of delivery should be used):

9-3, 19 92 Date 9-3, 19 92

The undersigned Buyer acknowledges receipt of a copy of this contract bearing signature and that of the Seller(s).

______

A copy of this contract bearing Buyer(s) signature and that of the Seller(s) was sent via ordinary or certified mail to the Buyer.

Agent ______

(WHITE ORIGINAL)—Broker's Copy (File In Deal Envelope) (GREEN COPY)—Purchaser's Copy Completed Contract
(YELLOW COPY)—Listing Agent's Copy Completed Contract (PINK COPY)—Seller's Copy (GOLD COPY)—Purchaser's Receipt (For Earnest Money)

STRACT & TITLE COM
— Helena, Montana 59601

Attached

The SE¼SE¼NE¼, E½NE¼SW¼ and NE¼SE¼SE¼ of Section 34, T. 10 N., R. 4 W., and the N½SW¼SW¼ and NW¼SW¼ Section 35, T. 10 N., R. 4 W., EXCEPT a tract of land in in the SW¼ Section 35, T. 10 N., R. 4 W., described as follows: Beginning at a survey cap corner #1 which is identical to the SW corner of the SW¼NE¼SW¼ and which lies S. 44° 57' 02" E. 1,857.78 feet of the west quarter corner a brass cap of Section 35; thence S. 89° 47' 40" W. 113.85 feet to a survey cap, corner No. 2, thence N. 09° 27' 20" W. 598.33 feet to a survey cap, corner No. 3; thence N. 72° 05' 00" E. 222.73 feet to a survey cap, corner No. 4, which is identical to the NW corner of the SW¼NE¼SW¼ Section 35; thence S. 00° 00' 20" E. along the west boundary of the SW¼NE¼SW¼ Section 35, 658.85 feet to the point of beginning, All in Lewis and Clark County, Montana.

City of ____, County of LEWIS & CLARK, Montana, legally described as

SEE ATTACHED A;

TOGETHER WITH all fixtures attached to the above described real property and attached buildings or structures except: PORTABLE STORAGE SHED

SMOKE DETECTOR(s): Property has # ONE None ____ smoke detector(s).

The following items of personal property, free of liens and without warranty of condition, are included: SATELITE DISH SYSTEM; 1 STOCK TANK (METAL) AND 1 ELECTRIC STOCK WATER TANK; REFRIGERATOR AND ATTACHED KITCHEN APPLIANCES.

RECEIPT FOR EARNEST MONEY: The undersigned sales representative hereby acknowledges receipt from Buyer of earnest money in the amount of (1,00.00)

[redacted]

U.S. Dollars ([redacted]) as evidenced by ( ) cash, (X) check, or ( )

All parties to this transaction agree that such funds will be held in a depository account by JOHN R. WOOLSEY, Broker and deposited ~~pursuant to Montana State Law~~. Parties agree that interest accruing on earnest money, if any, while deposited shall be payable to JOHN R. WOOLSEY

If interest is payable to the broker it is agreed that sums so paid are consideration for services rendered.

____ By. ____
(Selling Real Estate Firm) (Sales Representative)

TOTAL PURCHASE PRICE IS: [redacted] U.S. Dollars

([redacted]) payable as follows:

$ [redacted] earnest money to be applied at closing.

$ [redacted] as additional cash down payment, payable on or before closing.

$ [redacted] balance of the purchase price will be paid as follows: BALANCE to be paid at time of

SPECIAL PROVISIONS: SALE CONTINGENT ON SALE OF BUYERS HOME AT 6941 No. MONTANA AVE. - (Helena) ANY SURVEY TO BE AT EXPENSE OF BUYER. SALE SUBJECT TO WELL-TEST FOR WATERS PURITY. SELLER WILL HAVE ELECTRICAL UPDATED AT METER BASE AND INTO HOUSE. SELLER WILL HAVE CEMENT POURED ABUTTING NORTH WALL AND RESEAL WEST WALL TO STRENGTHEN MOISTURE BARRIER IN BASEMENT. SELLER WILL HAVE CEILING DAMAGE REPAIRED IN KITCHEN. SELLER TO REPLACE SMALL DOOR IN GARAGE & SLIDING DOOR IN BASEMENT. Subject To Buyer obtaining financing

Addendum(s) : # ____ None ____

DISCOUNT POINTS: If a Buyer obtains financing from a lender requiring discount points, Seller agrees to pay discount points up to a maximum of 0 percent (____%) of the Buyer's loan. Buyer shall pay all other discount points.

CONVEYANCE: The Seller shall convey the real property by WARRANTY Deed, free of all liens and encumbrances except those described in the title insurance section of this agreement. The Seller shall convey the personal property by bill of sale.

TITLE INSURANCE: Seller, at Seller's expense, shall furnish Buyer Title Insurance evidenced by a standard form American Land Title Association title insurance commitment in amount equal to the purchase price, committing to insure merchantable title to the real property in the Buyer's name, free and clear of all liens and encumbrances except: encumbrances hereinabove mentioned, zoning ordinances, building and use restrictions, reservations in federal patents, beneficial utility easements apparent or of record, easements of record, Special Improvement Districts (including rural SIDs), if any, which will be:

☒ paid off by seller at closing ☐ assumed by buyer at closing, and

If the Seller's title is not merchantable and cannot be made merchantable before the stated closing date, 30 ADDITIONAL DAYS SHALL BE ALLOWED FOR THE SELLER TO MAKE SUCH TITLE MERCHANTABLE. Encumbrances to be discharged by the Seller shall be satisfied prior to closing or from Seller's proceeds at time of closing

TAXES AND ASSESSMENTS: Seller and Buyer agree to prorate taxes, special improvement assessments for the current tax year, as well as pre paid rents, if any, as of the date of closing, unless otherwise agreed.

CLOSING DATE: The date of closing shall be NOVEMBER 15, 19 92. The parties may, by mutual agreement, agree to close the transaction at any time prior to the date specified. If third party financing is required by the terms of this agreement (includes assumptions, contracts for deeds, and lender financing), the closing shall occur on the date specified or as soon thereafter as financing is complete but no later than 30 days after the stated closing date. The Buyer and Seller will deposit with the closing agent all instruments and monies necessary to complete the purchase in accordance with this agreement. If Buyer fails to make written application for financing, apply for assumption of an existing loan or contract, or initiate any action required for completion of a contract for deed by 5.00 p.m. (mountain time) NOVEMBER 15, 19 92, Buyer will be in breach and Seller can exercise Seller's remedies under this agreement. If financing is called for herein and cannot be obtained, it is agreed that the earnest money will be returned to the buyer.

F.H.A. BUYER: The appraised value of the property being purchased, for mortgage insurance purposes, must not be less than ____ ($____). Please refer to this section on the reverse of this form for additional disclosures of your rights.

ADDITIONAL TERMS THAT ARE AN INTEGRAL PART OF THIS AGREEMENT ARE PRINTED ON THE REVERSE OF THIS FORM. PLEASE READ THE REVERSE SIDE OF THIS FORM, AS THESE TERMS WILL AFFECT YOUR RIGHTS AND RESPONSIBILITIES UNDER THIS AGREEMENT.

SALESPERSON'S REPRESENTATION: Buyer hereby acknowledges that the above identified sales representative has acted and continues to act through closing as representative and agent for the Seller, and not as representative and agent for the Buyer.

BUYER'S ACKNOWLEDGEMENT: Buyer acknowledges that he has examined the real and personal property, that Buyer enters into this agreement in full reliance upon his independent investigation and judgement, that prior verbal representations by the Seller or Seller's agents or representatives do not modify or affect this agreement, and that by signing this agreement Buyer acknowledges having read and understood this entire agreement, including the terms printed on the reverse page of this document.

BUYER'S COMMITMENT: I/We agree to purchase the above described property on the terms and conditions set forth in the above offer and grant to said sales representative until ____, 19____ at ____ am/pm to secure Seller's written acceptance. Buyer may withdraw this offer at any time prior to seller's written acceptance. If Seller has not accepted by the time specified, this offer is automatically withdrawn.

I/WE HEREBY ACKNOWLEDGE receipt of a copy of this RECEIPT AND AGREEMENT TO SELL AND PURCHASE bearing my/our signature(s)

Buyer's Address: ____ Buyer Signature: ____

Phone: ____ Buyer Signature: ____

SELLER'S COMMITMENT: I/We agree to sell and convey to Buyer the above described property on the terms and conditions hereinabove stated. I/We acknowledge receipt of copy of this agreement bearing my/our signature(s) and that of the Buyer named above. Dated this 1 day of Sept, 19 92.

Seller's Address: 1230 GRIZZLY GULCH Seller Signature: ____

Phone: (406) 442-6718 Seller Signature: ____

DELIVERY TO BUYER OF A COPY OF ACCEPTED OFFER (one of the following methods of delivery should be used):

9-3, 19 92 Date 9-3, 19 92

undersigned Buyer acknowledges receipt of a copy of this contract bearing signature and that of the Seller(s).

A copy of this contract bearing Buyer(s) signature and that of the Seller(s) was sent via ordinary or certified mail to the Buyer.
Agent ____

(WHITE ORIGINAL)—Broker's Copy (File in Deal Envelope) (GREEN COPY)—Purchaser's Copy Completed Contract
(YELLOW COPY)—Listing Agent's Copy Completed Contract (PINK COPY)—Seller's Copy (GOLD COPY)—Purchaser's Receipt (For Earnest Money)

BUSINESS HISTORY

The proposed operation will be organized as a partnership owned by Jerry L. Christison and Genevieve R. Christison. The purpose of the partnership will be to raise top quality registered Rocky Mountain elk for breeding stock and velvet horns. We have been in this business for five years, starting with one pair purchased in 1987. We presently have 9 , having sold several bull calves and other young elk not suitable for top brood stock.

I was raised on a ranch, my parents and grandparents were ranchers, and I have extensive knowledge in animal health and the ranching industry. I have also had 20-25 registered horses and done my own vet work and training for the past 15 years, marketing horses as far away as California.

I am an officer in the Montana Game Growers Association and have attended National and State meetings to gain knowledge of the industry. I receive several publications about the industry, also. I have visited many elk operations in Montana and other states to gain information on health, nutrition, and handling facilities. I am involved in legislation and rule-making with the State Legislature and the other regulating agencies. My knowledge of the industry is extensive. I have done research into all facets including international trade of live animals and parts. I feel strongly about the future of the industry and its future for small Montana ranches or income to supplement large ranch incomes.

We plan to purchase 120 acres which consists of a homestead and is located just 2.1 miles from my present office in Helena. The land is not suitable for a profitable cattle ranch since there is no irrigation water or enough hay land. However, it will make an excellent elk ranch due to its good natural feed and cover. Eighty to 100 acres is all I wish to fence for elk due to the cost of fencing material and the size of herd I think will provide the income to retire the loan and make a nice profit without adding excess labor.

Elk ranching has a great future for Montana as an industry. Prices are predicted to remain at today's level for at least ten years due to the demand for breeding stock. There is only about 4500 domestic elk in the U.S.,with a demand for five times that many today. I receive several unsolicited requests to purchase elk both by phone and letter every month. I have enclosed a few, some from Korea and other countries. We can sell all the animals we want for the following prices:

Elk bred cows	7-10,000
Elk heifer calves	5-6,000

Elk bulls	4-5,000
Elk bull calves	2-2,500

Last year unborn heifer calves sold at auction for $6,000 to be delivered in the fall. Cows sold at the same auction for $10,000. The price in Canada is $15,000 for bred cows but the border is closed and may not be reopened for several years, which will push prices up when it opens. Velvet horns sell for $75 - 85 per pound and each mature bull yields about 23-25 pounds per year. When all the breeding stock market is met, there will still be demand for venison due to its excellent health value. It is lower in fat and cholesteral than turkey and still tastes like beef. The market price is $1500 for an average carcass and there is a strong demand. Ninety percent of the present U. S. venison market is filled with venison imported from New Zealand and other countries. We do not anticipate our prices ever dropping below the $1500 per animal and that is only after all brood stock demand is filled.

My initial costs will include the purchase of 120 acres plus a nice house for [redacted], fencing about 1 mile of fence for $10,000, a barn for $10,000 which will include handling facilities. I plan to sell 20 acres for [redacted] to help with these costs and reduce my debt. I also have 15 horses I plan to sell for about [redacted]. This should give me operating money to get started. I have nine elk which include 1 registered pure blood bull and 4 cows, one of which had twin heifer calves this year. This twinning trait is genetic and will pass on to offspring. I do not plan to purchase more stock but instead allow time for the natural expansion of this very superior line which gave me 120% calf crop. It will take me 4 years to have 20 cows after culling and selling the bull calves. Twenty calves will produce:

10 bull calves @ $2200	=	$22,000
10 heifer calves @ $5000	=	$50,000
Bull horns @ $2000	=	$ 2,000
Yearly income	=	$74,000
Loss of 10% death, etc.	=	$ 7,400
Total	=	$66.600

Feed costs, 620 bales hay	=	$ 1,240
Grain	=	860
Vet care, testing,etc.	=	1,000
Misc. maint. & repair	=	1,800
Extra labor	=	5,000
Net income		$56,700

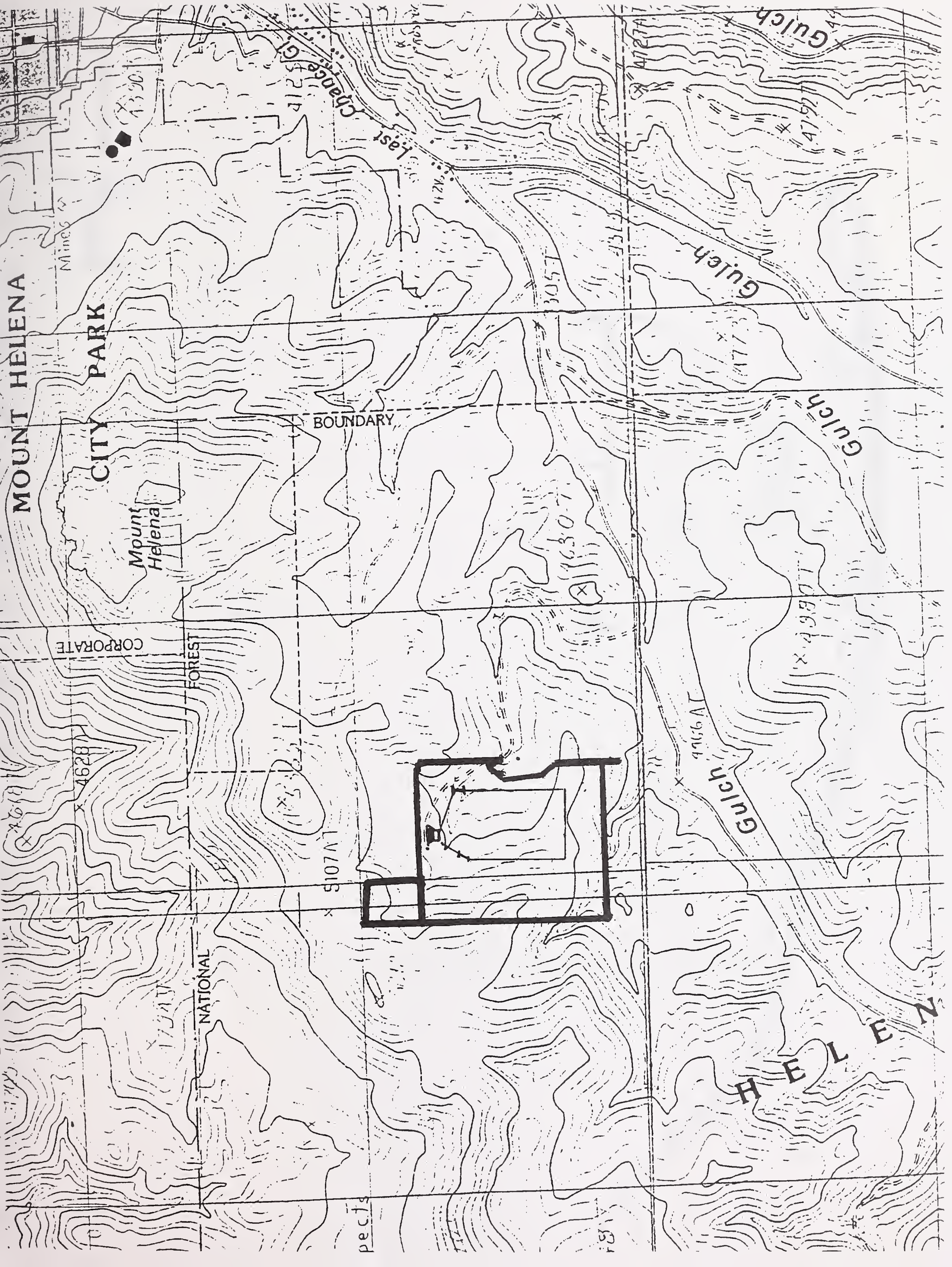
This is the income that is projected by the National Association for at least 10 years. After the demand for brood stock is filled the income will change, so an increase in herd to 30 cows:

15 bull calves @ 2 yr. old	=	$22,500
15 heifer calves @ 2 yr. old	=	30,000
Velvet horns	=	2,000

Total		$54,500
10% loss		5,450
Feed costs will increase due to carryover to get 2yr weight	=	1,850
Vet care will be in house	=	300
Misc.	=	600
Labor , son-in-law	=	5,000
Net income	=	$44,050

I will also have a retirement income of [redacted] from the SBA and miscellaneous sales of trucks, horse trailers, and horses, that I have dealt with for about 30 years, of about [redacted] per year.

My son-in-law and daughter want to purchase a house site so they can live on the ranch and help with raising elk. My son-in-law has helped me for the last 2 years and is a competent ranch hand having grown up on a ranch in Toston. He will be able to provide day to day management when I am out of the area or if incapacitated. My wife and I will keep the books and provide day to day management, marketing and sales decisions. We will continue to increase our knowledge and skills by reading literature and attending National and State meetings. I also have worked for the Small Business Administration for 22 years in finance and business assistance so have a thorough knowledge of business practices in all areas.


MOUNT HELENA
CITY PARK
Mount Helena
CORPORATE
BOUNDARY
FOREST
NATIONAL
Last Chance Gl
Gulch
Gulch
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HELEN
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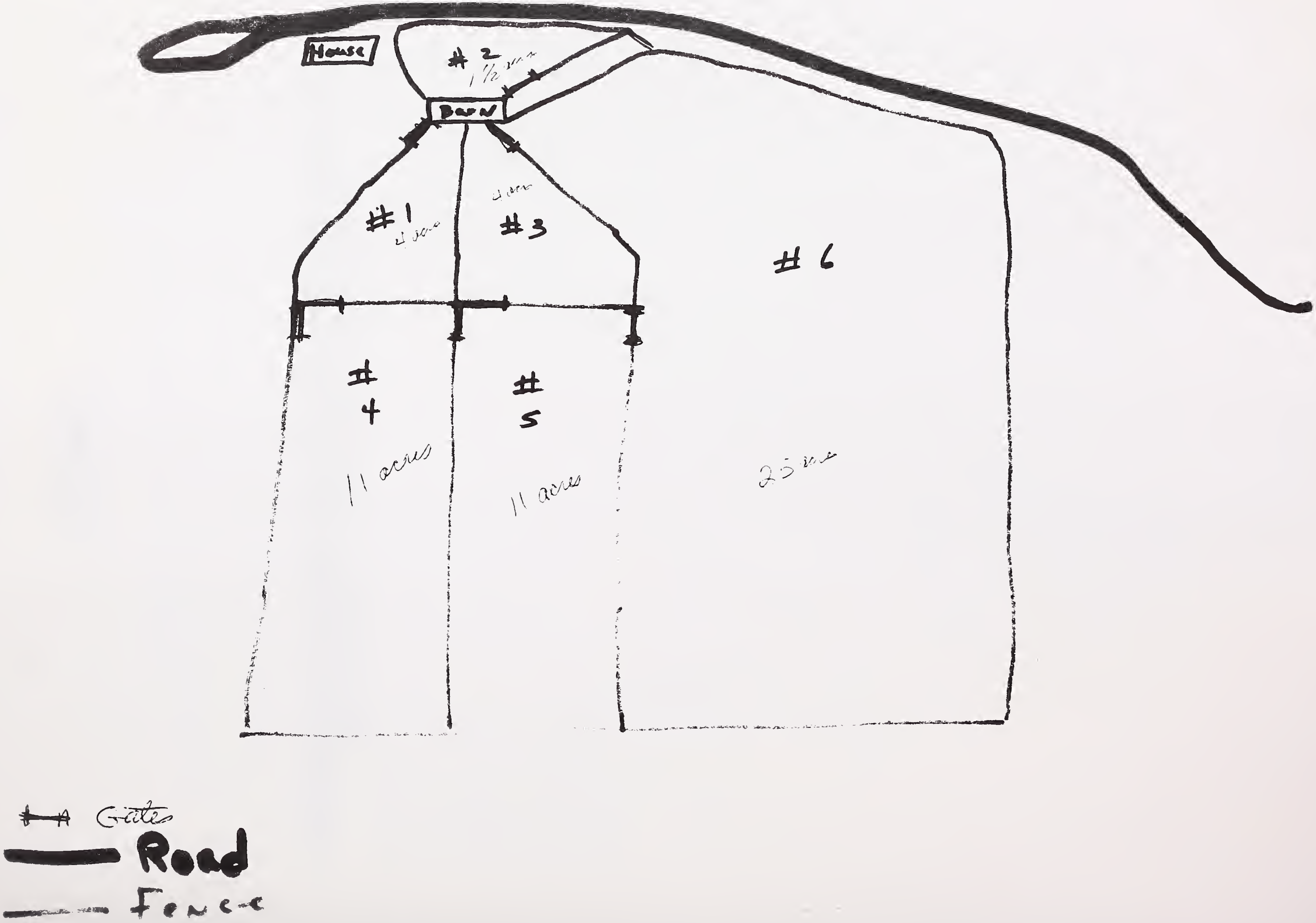
Mines


House
#2
1 1/2 acres
Barn
#1
4 acres
4 acres
#3
#6
#4
11 acres
#5
11 acres
25 acres
Gates
Road
Fence

APPENDIX C

SUMMARY OF BACKGROUND INFORMATION PERTAINING TO REGULATION OF THE GAME FARM INDUSTRY

SUMMARY OF BACKGROUND INFORMATION PERTAINING TO REGULATION OF THE GAME FARM INDUSTRY

Compiled by the Wildlife Division
Montana Department of Fish, Wildlife and Parks

INTRODUCTION:

The game farm industry has recently experienced national and international growth and expansion, fueled by a lucrative market for breeding stock, market potential for meat and other animal products, Asian demand for certain animal parts - particularly velvet antlers from deer and elk, and trophy shooting. Unprecedented international marketing and translocation of live animals is of increasing concern to wildlife managers and livestock interests, due to attendant threats to native wildlife populations and domestic livestock. In the U.S., wildlife concerns are most accentuated in western states that feature extensive wildlife habitats and premiere wildlife resources -- most especially the Rocky Mountain states, where wildlife is a significant cultural and economic asset.

The need for adequate safeguards for wildlife populations and domestic livestock has prompted wildlife and agriculture agencies in other states, as well as other countries, to institute game farm regulations that emphasize the following: 1) importation requirements for game farm animals, including disease screening and testing, 2) importation bans for deleterious animal species, 3) record keeping requirements, including individual animal identification, and 4) minimum requirements for game farm facilities (fences and equipment to restrain, handle and quarantine animals). Montana, Washington, Oregon and Nevada are currently in the process of updating or revising obsolete game farm rules and statutes. Other western states have either done so recently (Wyoming, Utah, Idaho, California and Colorado) or plan to do so in the near future (North and South Dakota). The following game farm issues are not unique to Montana....they are regional, national and international in scope:

- Some varieties of game farmed animals are known to pose the following threats to wildlife: 1) introduction and transmission of diseases and exotic parasites (a potential threat to domestic livestock also), 2) hybridization/genetic pollution of native wildlife populations, and/or 3) habitat competition/degradation, resulting from establishment of feral populations of escaped game farm animals. The history of game farming around the world demonstrates that any one of these risk factors can result in permanent, irreversible damage to native wildlife resources.

• The track record of game farming in Montana and in other states and provinces indicates that escape of game farm animals from their enclosures is inevitable (Lanka et al. 1990). Causes of such escapes include: inadequate fencing, poor fence maintenance, fallen trees, fire, flooding, wind, drifted snow, damage to fences by confined animals or wild animals during breeding season, vehicle accidents, gates left open, etc. Therefore, any animal species or hybrid that is game farmed in Montana will in all likelihood come into contact with native wildlife and domestic livestock. To provide effective containment of game farmed animals and minimize the potential for contact between game farm animals and wildlife populations or livestock, states and provinces have instituted minimum fencing requirements for game farms. In addition, states and provinces have imposed importation bans on animal species or hybrids that are difficult to contain or recapture, and that clearly pose the threat of irreversible damage to wildlife populations through transmission of diseases or parasites, hybridization or habitat competition/degradation.

• Regulations requiring animal handling and/or quarantine facilities have proven to be necessary to provide the capability for game farm operators and game farm regulators to verify animal identification (ear tags and/or tattoos) and accomplish disease testing, treatment and control. Record keeping requirements, including individual animal identification, have also proven to be prerequisite to accomplishing disease monitoring and control, providing a means to backtrack ownership and movement of individual game farm animals. Record keeping requirements also serve as a deterrent to theft of native wildlife.

• Recent growth of the game farming industry has fueled a number of controversial issues associated with certain game farm practices:

- illegal activities prompted by a lucrative market in wild animals and animal parts, including poaching of wild animals, illegal trade in animal parts, and illegal capture and confinement of wild animals.
- detrimental impacts associated with locating game farm facilities in critical wildlife habitats, including obstruction of traditional migration routes and displacement of wildlife from traditional winter ranges.
- ethical and philosophical concerns about game farm practices that affect public perception of traditional sport hunting, including "canned hunts" (commercial shooting of penned, constrained or tame animals).
- animal welfare concerns, to include conditions under which animals are confined and cared for, and practices such as de-antlering elk and deer.
- expense of regulating the game farm industry, which in

other states and provinces has necessitated diversion of funds from existing wildlife management programs.

DISEASES AND PARASITES of wildlife and captive game farmed animals are not nearly as well documented or researched as they are for domestic livestock. Existing disease testing procedures, developed for use in domestic livestock, do not always provide definitive diagnosis for native wildlife or exotic species. False negative and false positive test results are known to occur with most testing procedures (Lanka et al. 1990). Diagnostic tests have not even been developed for a number of wildlife diseases, restricting identification of such diseases to postmortem examination. These circumstances, combined with escalating trade and translocation of game farm animals (nationally and internationally) have significantly increased the potential for diseases or parasites to be inadvertently introduced to game farms and subsequently, to nearby wildlife populations and/or domestic livestock. Species (and hybrids thereof) that pose known animal health threats to Montana wildlife populations include: wildebeests, hartebeests and sassabies (malignant catarrhal fever); imported moose (especially those from areas where meningeal worm or the large liver fluke is endemic); wild hogs and javelina (pseudorabies); imported white-tailed deer (from areas where meningeal worm is endemic or individuals exposed to infected whitetails); and caribou and reindeer (carriers of Brucella suis type 4).

HYBRIDIZATION/GENETIC POLLUTION: Hybridization may occur between different species, different races (subspecies) and distinct populations within a subspecies. Fertile hybrids are common within certain groups of mammals (e.g., sheep, Ovis sp.; goats and ibex Capra sp.; and deer, Cervus sp.). Cross-breeding of subspecies can have significant impacts on wild populations because such hybrids are most likely to result in viable, fertile offspring. Reproduction of hybrids in the wild results in genetic pollution of the gene pool of native wildlife species. Some hybrids may even have a competitive advantage over closely related native species....due to higher reproductive potential, (larger litter size or earlier breeding age), more aggressive social and breeding behavior, more flexible dietary requirements, or greater disease resistance. For example, red deer and red deer hybrids have a competitive advantage over American elk by virtue of the more aggressive breeding behavior of male red deer and red deer hybrids. Species (and hybrids thereof) that present known hybridization threats to native Montana wildlife populations include red deer, sika deer, axis deer and mouflon.

HABITAT COMPETITION/DEGRADATION: History is replete with examples of both intentional and inadvertent introductions of exotic plant and animal species with unanticipated and undesirable results. Familiar examples in the U.S. include introduction of the

English sparrow, nutria, grass carp and Mediterranean fruit fly, as well as a host of noxious plant species such as spotted knapweed, Canada thistle and purple loosestrife. Another example of local significance is the introduction of mysis shrimp into Flathead Lake. In the case of many exotic animal species, the potential for habitat competition/degradation is accentuated by attributes such as a high reproductive potential (large litter size or early breeding age), aggressive social behavior, flexible dietary requirements, absence of effective predators, and resistance to disease.

Feral populations of game farm animals have caused significant damage to wildlife habitat in a number of other states - wild hogs being one of the most notable. Habitat competition/degradation problems are most accentuated in southwestern states, which provide a "crystal ball" view of problems that Montana could ill afford to cope with. Two species of ibex and gemsbok have established feral populations in New Mexico, to the detriment of native deer and desert sheep populations. In Texas, feral populations of nilgai antelope, axis deer, aoudad, sika and fallow deer (in order of prevalence) are well-established (Teer 1992). A 1988 survey of exotic animals in Texas documented 123 species or varieties of exotics in the state (Traweek 1989). A total of 90,400 animals was confined and an estimated 73,857 were free-ranging, for a combined statewide total of 164,257 (not including feral hogs). Many of these animals are of questionable ancestry, including many that are inbred or hybrid. Studies conducted on the Kerr Wildlife Area, and elsewhere in Texas, have demonstrated that axis, fallow and sika deer can out-compete white-tailed deer. Colorado and Wyoming have had to conduct expensive eradication control measures directed at feral red deer, Barbary sheep and ibex to protect native deer, elk and bighorn sheep populations and their habitats.

Game farmed species that have been free-ranging in Montana include mouflon sheep (eastern and western Montana) and fallow deer (Yellowstone River bottom in the Glendive-Sidney area and the Pryor Mountains). Game farmed species (and hybrids thereof) posing the greatest threat to Montana wildlife from a habitat competition/ degradation standpoint include: chamois, tahr, exotic goats native to Europe and Asia and the Middle East (including ibexes and markhor), Barbary sheep (aoudad), oryx, gemsbok, addax, reedbucks, Rusa deer, Sambar deer, roe deer, wild hogs and javelina.

PROBLEMS PROMPTING THE NEED FOR STATE REGULATION OF GAME FARMS, SOME EXAMPLES:

- In a year's time in Colorado (1990-91), 40% (16 of 41) of the game farms had wild animals enter (mule deer, most commonly); 21% (9 of 41) of big game facilities reported detected escapes; there were at least 2 cases of illegal capture/holding of wild deer or elk; and 5 escaped game farm elk were harvested by hunters. Escaped animals traveled 5-40 miles. These statistics were documented after the game farm issue was made a high priority by CDW, with additional staff and a substantial budget devoted to game farm monitoring and regulation.

- One of the escaped game farm "elk" shot by hunters in Colorado last year was determined to be a red deer hybrid. The hunter that killed it reported that it was a herd bull with a harem, so it presumably bred a number of wild cow elk while it was free-ranging.

- In Montana, two escaped game farm elk were shot by hunters during the 1991 hunting season, one of which was a suspected red deer hybrid.

- Genetic testing of captive elk herds in Colorado and Alberta revealed 10% (Colorado) to 11% (Alberta) of game farm elk to be red deer hybrids.

- In Colorado, feral populations of ibex, Barbary sheep (aoudad) and mouflon sheep have become established as a result of game farm escapes (Barbary sheep in the Roan Creek area near DeBeque, Barbary sheep, red deer and ibex near the Cathedral Bluffs north of Greeley and mouflon sheep in the Black Canyon of the Gunnison). Mouflon may have hybridized with the Black Canyon bighorn sheep population to an extent to warrant extermination of the entire sheep herd. Last year the Colorado Division of Wildlife estimated that there are in excess of 1,000 exotic animals in the state, approximately 125 of which are free-ranging.

- Control/eradication measures conducted by other states and provinces have proven to be very costly, requiring diversion of considerable sums of money and personnel time from existing wildlife management programs. Eradication of feral populations of exotic animals has proven to be impossible in rugged terrain or heavy vegetative cover. But feral populations have in some cases been confined within a specific geographic area.....at considerable on-going effort and expense.
    - New Mexico's Game and Fish Department has controlled Barbary sheep (aoudad) at a cost of $2,500 per animal.
    - Colorado reports that efforts to control ibex and aoudad have included an effort that eradicated 8 animals at a cost of $48,000 (charged to a game farmer) and an operation that removed 18 animals at a cost in excess of $65,000.
    - Wyoming, even though it bans game farms (except one grandfathered in 1973), is collaborating with Colorado in an expensive eradication program targeting red deer, aoudad and ibex in an area where the two states share a border. Wyoming also had mouflon hybrid sheep in the wild as a result of a trailer wreck in the Wind River canyon.

- Refer to the enforcement issues addendum for a list of problems and infractions that have been documented to date on game farms in Montana.

- Refer to the animal health addendum for a summary of disease concerns pertaining to the game farm industry.

- Refer to the hybridization addendum for a list of hybrid crosses that are known to occur.

- Refer to the prohibited and restricted species addendum for an itemization of species for which importation is prohibited or restricted under provisions of Montana's new game farm rules (adopted May 15, 1992).

ADDENDUM: ENFORCEMENT ISSUES

In conjunction with initiating a rule-making process, the DFWP conducted a statewide inventory of all game farms. During a statewide inspection on March 2, 1992, attention was focused on obtaining a complete inventory of species and numbers of animals present; assessing condition and status of fencing and presence of handling and other game farm facilities, and following up on apparent discrepancies in annual reports submitted to DFWP in January, 1992. Problems and discrepancies that were revealed and documented as a result of a simultaneous inspection of all game farms in the state included:

1) Importation and export of game farm animals without required health inspections.

2) Movement of game farm animals known to be diseased, between game farm operators.

3) Abuse (transfer/re-use) of USDA ear tags: a cross-check between Montana records and those of several other states revealed animals imported as one sex and later exported as the opposite sex; imported as one species and exported as a different species; multiple deaths/rebirths attributed to the same animal, etc.

4) New, unused USDA ear tags in the possession of game farmers (they are to be possessed and applied only by licensed and accredited veterinarians), as well as possession of used ear tags that had been treated and prepared for re-use.

5) Deliberate baiting/trapping of wild animals onto game farms.

6) Fraudulent reporting of numbers and sex of game farm animals. On individual game farms, discrepancies between the number of elk on hand and the number of elk reported or accounted for through bills of sale ranged between 1 and 44. For white-tailed deer and mule deer, the statewide discrepancy between the number of animals on hand and the number accounted for was 63 and 440, respectively.

7) Poor condition/poor maintenance of fences, allowing animals to egress and ingress.

8) Electric fencing inadequate to contain game farm animals or to exclude wildlife. In addition, the power was disconnected at two game farms on the day of the statewide inspection.

9) Multiple use of invoices (duplicate copies) as well as alteration of those invoices (including numbers and sex of animals transported and dates of transactions).

10) Movement of animals between game farms without the required

bills of sale.

11) Unreported escapes of game farm animals.

12) Ingress of wild animals onto game farms.

13) Operation of unlicensed game farms.

14) Theft of game farm animals from one operator by another.

15) Possession of species not included on the operator's game farm license.

16) Failure to submit a copy of the bill of sale (to DFWP) within the required 10 days.

17) Movement of animals between unlicensed and licensed game farm operators.

18) Inaccurate reporting of game farm animals to county assessors for taxation purposes.

19) Inability of game farm operators (or DFWP personnel) to accurately census game farm animals in very large game farm enclosures.

20) Need for some improvements to game farm report forms issued by DFWP.

Follow-up investigation of the foregoing problems and infractions resulted in search warrants being served on July 8, 1992, to 13 game farm operators on 12 game farms. Game farm records and other material evidence were seized at these premises and prosecutions are pending.

ADDENDUM: ANIMAL HEALTH

When animals are moved from one geographic location to another, any parasites or infectious disease agents they harbor are moved with them. Unfortunately, translocation of animals with little or no forethought or precaution has historically been the rule, rather than the exception. Inadvertent transcontinental introductions of parasites and diseases of major significance are well documented, including the following examples:

- introduction of rinderpest from Europe to Africa via domestic cattle.
- introduction of the Echinococcus granulosus tapeworm to various parts of the world via introductions of various species of deer.
- introduction of the large American liver fluke (Fascioloides magna) from North America to Europe via American elk.
- introduction of a protozoan parasite that causes whirling disease from Europe to North America via imported brown trout.
- introduction of two nematode parasites (Camelostrongylus mentulatus and Trichostrongylus probolurus) from India to Texas via blackbuck - (in spite of quarantine procedures).

DISEASES AND PARASITES OF CONCERN WITH REGARD TO GAME FARMING:

Brucellosis (B. abortus): The bovine brucellosis bacteria is passed from infected individuals to other animals through oral contact with aborted fetuses and fetal membranes and fluids. Bison in and around Yellowstone and Grand Teton National Parks carry brucellosis. Elk that make use of winter feeding grounds in Wyoming are also infected, with infection rates on some feed grounds ranging between 16% and 45%. There is concern in Wyoming and Montana about the potential for brucellosis to be transmitted from bison or elk to domestic livestock. The B. abortus bacteria causes undulant fever in humans. Symptoms include recurring fever, muscle and joint aches, headaches and nausea. Undulant fever is usually treatable with antibiotics. Brucellosis in elk is unlikely to be contagious to hunters at the time of the fall hunting season. However, there is potential risk in handling reproductive organs during field dressing. The meat of infected animals is edible and does not pose a health risk to humans.

Brucellosis (B. suis type 4): The B. suis type 4 form of brucellosis is prevalent in free-ranging caribou and herded reindeer populations in Canada, Alaska and Scandinavia. The incidence of sera positive caribou on the Seward peninsula of Alaska is as high as 30%. There is uncertainty as to how it is transmitted. Commonly used field tests (rapid card test and standard plate test) will identify acutely infected individuals but not all chronically infected carriers. Cattle exposed to infected reindeer will sera convert, thereafter testing positive for brucellosis. B. suis type 4 is known to be fatal to moose but it is not known how exposure would affect mule deer or white-tailed deer. B. suis type 4 can be transmitted to humans and is considered by some to present a more serious threat to human health than B. abortus. Human deaths attributed to B. suis type 4 infections occur most commonly among native peoples in Canada and Alaska.

Tuberculosis (Mycobacterium sp.) Mycobacterium bovis is the most frequently isolated strain of tuberculosis found in hoofed animals. This slow-growing bacterium can be transmitted via respiratory secretions and other body fluids, and can remain viable for a considerable period of time in the environment. Existing Tb testing procedures, developed for domestic livestock, cannot determine with certainty whether or not the disease is present in cervids. Due to limitations of Tb tests for identification of infected individuals, testing is applied on a "whole herd" basis to identify infected herds (a minimum sample size of 200 is recommended by AgCanada). Tb infections are often not visibly apparent in cervids - animals that appear to be perfectly healthy may harbor Tb lesions. This was verified recently in the case of a Tb-infected elk herd on a Colorado game farm. Postmortem examinations revealed gross Tb lesions in healthy-appearing animals, some of which had been harboring Tb for at least 4 years.

Alberta and Ontario are dealing with the aftermath of a major Tb outbreak in captive cervids. In the U.S., Tb has been confirmed in 13 game farm herds as of September 1, 1992, with tissue cultures pending for an additional 13 herds (Dr. Mitchell Essey, USDA, personal communication). To date, Tb testing in Montana has indicated Tb in 5 game farm cervid herds. In Canada, Tb has been transmitted from captive cervids to a cougar, pigs, domestic cats, llama and cattle. The USDA has documented four instances of Tb transmission from game farmed cervids to domestic livestock in the U.S. to date (Pennsylvania, California and 2 in New York). Transmission of Tb from game farmed cervids to domestic livestock has resulted in loss of New York's Tb-free status, with Pennsylvania soon to follow (Dr. Frye, USDA, personal communication).

Transmission of Tb to free-ranging wildlife populations would be a catastrophe. Efforts to control it, to protect wildlife resources and the state's livestock industry, would be very expensive and likely, futile. Examples of known, persistent "reservoir" wildlife species, that in other parts of the world have precluded eradication of Tb from free-ranging wildlife, captive wildlife and domestic livestock, include the Asian water buffalo in Australia, the brush-tailed opossum in New Zealand, European badgers in Europe and cape buffalo in Africa. Expensive eradication/control programs targeting reservoir wildlife species have proven universally to be unsuccessful. New Zealand is a good example. Even though infection rates have been reduced as a result of a multi-million dollar Tb eradication program, Tb persists in 50% of captive red, fallow and sika deer herds and in free-ranging deer herds occupying a third of the country's land area.

Bovine tuberculosis poses a substantial human health threat. If Montana wildlife populations were to be infected with Tb, hunting and other wildlife-related recreational activities that are currently public assets would be transformed into human health hazards.

Johne's Disease (Mycobacterium paratuberculosis): The slow-growing bacterium, M. paratuberculosis, causes enteritis in domestic livestock and wild ruminants. It is spread in the feces of infected animals and may persist in the environment for several months. While it can be fatal, it is not apparent in many infected animals. Johne's disease is very difficult to diagnose in live animals (and difficult to distinguish from Tb) and has proven to be virtually impossible to eradicate or control in the wild. In all cases where it has been documented in free-ranging wildlife, association with infected livestock has appeared to be the source of infection. However, it has been demonstrated that once a wildlife population is infected, it can serve as a reservoir for the disease, dispersing and maintaining the bacteria indefinitely (as is the case with Tule elk at Point Reyes National Seashore, California).

Meningeal worm (Parelaphostrongylus tenuis) is carried by white-tailed deer and is prevalent in the eastern U.S. (E. of the 100th meridian - as far west as Manitoba and eastern N. Dakota). The prevalence of infection in white-tailed deer populations in the eastern U.S. varies widely but exceeds 90% in some areas. P. tenuis larvae are resistant to freezing and desiccation in the environment. The arid great plains is credited as serving as a natural geographic barrier that has historically excluded this parasite from the western U.S. The adult meningeal worm is normally found in the meningeal covering of the brain in white-tailed deer. The larvae are shed in the feces of their host. After penetrating land snails or slugs the larvae are able to complete their life cycle when the infected snail is ingested by a suitable host. The larvae develop into subadult worms that migrate to the brain where they mature and produce larvae. With ingestion of a single infected snail, a white-tailed deer, becomes a prolific meningeal worm "factory", dispersing larvae in the environment. There is no definitive test for detecting the presence of this parasite in ungulates, nor is there a means to treat an infected individual or infected population.

As the natural host to meningeal worm, whitetailed deer exhibit no symptoms of infection. However, meningeal worm causes debilitating - and usually fatal - neurologic disease in other native North American cervids, many exotic ruminants and several domestic ruminants. Recent research in Alberta has verified that some elk can survive meningeal worm infections and shed larvae -- intermittently and generally in lower numbers than whitetails (Samuel et al. 1992). Research in Canada has shown the traditional Baermann technique to be less than 35% effective in detecting meningeal worm infection in elk.

Fatal meningeal worm infections have been reported for all cervid species native to North America (moose, caribou, elk, mule deer, black-tailed deer, white-tailed deer and pronghorn antelope) as well as several exotic species (fallow deer, eland and sable antelope) (Pybus 1991). Published reports of meningeal worm infection in domestic livestock exist for sheep (Connecticut, Minnesota, New Hampshire, New York and West Virginia), goats (Michigan, New York and Texas) and llamas (Minnesota, Ohio, Texas and Virginia) (SCWDS Briefs). Domestic cattle have not been shown to be susceptible to infection.

The threat of introducing meningeal worm prompted the province of Alberta to close its borders to importation of all ungulates in September, 1988. British Columbia followed suit in May 1991, by banning importation of elk, moose, white-tailed deer and mule deer.

Tissue worm (*Elaphostrongylus cervi*): is a close relative to meningeal worm. It is not native to North America but is prevalent in Scandinavia and New Zealand. The worm occurs in muscle tissue as well as in the central nervous system and causes neurological symptoms similar to those characteristic of meningeal worm. Tissue worm has been translocated in reindeer from Scandinavia to an island off New Foundland. The reindeer didn't survive but the tissue worm parasite persisted in native caribou populations. Red deer and alpacas recently imported to Canada from New Zealand were found to be infected with tissue worm. Introduction of tissue worm is considered as great a potential threat to wildlife and domestic livestock as introduction of meningeal worm. Alberta recently banned importation of alpacas and llamas to prevent introduction of *E. cervi* into the province.

Malignant catarrhal fever (MCF) : there are two known forms of this sporadic, fatal disease of ruminants and cattle. The form that occurs in the wildebeest family is caused by a herpes virus. The virus responsible for the form that occurs in domestic sheep has not been identified but can be diagnosed through a serum test. There is not a lot known about transmission of MCF. It appears that the virus is shed in the respiratory secretions of calves and lambs. While the virus does not affect its host, it is fatal to other exposed cervids and livestock. Outbreaks of MCF in native cervids, though uncommon, are typically seen in captive herds, under crowded conditions. Game farmed species such as axis deer, sika deer, red deer, blackbuck antelope and bison are susceptible, as well as the native cervid species. The potential for virus transmission is enhanced by proximity to sheep or members of the wildebeest subfamily (wildebeest, topi, hartebeest and blesbok). A recent documented case of MCF in game farmed ruminants occurred in December 1991 and involved captive WT deer in Alabama (SCDWS Briefs).

Pseudorabies (PRV): is a viral disease of swine that causes abortion in sows and fatal illness in newborn pigs. Older swine do not show symptoms but can become lifetime carriers. Cattle, sheep, dogs, cats, raccoons, foxes, and small mammals can become infected and die suddenly of virus-induced nerve and brain damage. Surveys conducted by SCWDS and other researchers have revealed that wild swine commonly harbor PRV. Pseudorabies in wild hogs has been documented in 12 states: Alabama, Arkansas, California, Florida, Georgia, Hawaii, Louisiana, Missouri, Mississippi, Oklahoma, South Carolina and Texas (SCWDS Briefs).

Besnoitosis: is caused by a protozoan parasite found in the bones, tendons and fascia (just under the skin) of the legs and face of infected caribou and reindeer. Post mortem examinations indicate that 21% to 23% of caribou in British Columbia are infected with the North American form of the parasite (Besnoitea tarandi) (Dr. Ron Lewis, personal communication). The Old World form (Besnoitea benwadi) occurs in cattle, goats, sheep and antelope in Africa, the Middle East, Eastern Europe and sporadically in Western Europe. Neither the life cycle of the parasite or the means by which it is transmitted are well understood. Recent research in France suggests that biting flies may play a role. Severe cases of the disease are manifest in sloughing of the skin from the infected animal's head and legs. Although besnoitosis does not cause serious health problems in caribou and reindeer, it proved to be fatal to deer species housed near infected reindeer in the Winnipeg zoo. Deer mortality from besnoitosis has also occurred at a wildlife park located near Moose Jaw, Saskatchewan. Musk oxen are also known to be susceptible. The North American form of besnoitosis has not been shown to be infective to domestic cattle.

Other Diseases of Concern: There are a number of diseases that have been identified in wildlife only recently such as chronic wasting disease, bovine spongiform encephalopathy (BSE), dermatophilosis and poxviral dermatitis. In addition to the more well-known diseases itemized above, participants in the January 1991 Game Farming Symposium in Boise Idaho identified the following diseases of concern associated with game ranching/farming of cloven-hoofed animals: Brucella ovis, orbiviruses (bluetongue and epizootic hemorrhagic disease), pseudorabies, spongiform encephalopathies (scrapie, bovine spongiform encephalopathy, chronic wasting disease), arterial worm (Elaeophora schneideri) and ectoparasites such as ticks, mites and lice. Participants in this symposium recommended that all game farm animals be examined for evidence of all of the above diseases prior to being cleared for importation to any state or province.

During the course of providing the foregoing information on animal diseases and parasites, recognized experts in the animal health field expressed worry that comparatively little is known about diseases of wildlife species, especially species that are not indigenous to North America. This is in contrast to a substantial accumulation of knowledge and experience concerning diseases of domestic livestock species - as well as proven technology to test and treat domestic livestock. There are many as-yet-unknown health ramifications of confining animal species that are not accustomed to crowding, mingling of species that have never before come into contact, and translocation of animals from one geographic area to another. The animal health experts we talked with advocate caution on the part of wildlife managers and veterinarians, urging that we maintain the same level of concern and caution for what is not yet known about animal health issues related to game farming, as we do for the animal health concerns that we currently do know something about.

ADDENDUM: HYBRIDIZATION

Occurrence of the following hybrid crosses has been documented:

ELK X RED DEER - Common in New Zealand and on many North American game farms. Free-ranging red deer and elk have hybridized extensively in New Zealand (Harrington 1985, Challies 1985, Short 1985). Elk and red deer have been intentionally hybridized on New Zealand game farms to produce "megareds". Genetic screening of captive elk in Colorado revealed evidence of red deer hybridization in 13 of 21 game farm herds (10% of the individuals tested). Genetic testing of game farmed elk in Alberta indicated that 11% are/were hybrids. The genetic testing laboratories in the U.S. and Canada report that blood samples submitted to them for genetic testing are running between 10% and 18% positive for evidence of red deer hybridization.

RED DEER X SIKA DEER - Free-ranging red and sika deer in Ireland have hybridized to the extent that it is now believed that no pure individuals of either species remain (Harrington 1985, Ratcliffe 1987).

ELK X SIKA DEER - Some game farmers in the U.S. are crossing sika deer and elk to produce an "American sika deer" (5/8 elk and 3/8 Asian sika deer). Use of these American sika deer as herd sires is promoted as a way for game farmers to "upgrade" their Japanese sika deer herds to elk-size hybrids.

RED DEER X SIKA DEER X ELK - At the center of a recent court case in Wyoming were 12 red deer/sika deer/elk hybrids that an individual imported into Wyoming. They produced fertile offspring.

MOUFLON X BIGHORN SHEEP - Hybridize readily and produce fertile offspring.

AXIS X RED DEER - Produce fertile offspring

AXIS X WHITE TAILED DEER - Hybridization known to occur in penned situations.

ADDENDUM: GENERA AND/OR SPECIES FOR WHICH IMPORTATION INTO MONTANA IS PROHIBITED OR RESTRICTED UNDER PROVISIONS OF THE NEW GAME FARM RULES:

1) In the family Bovidae: all members of the following genera and hybrids thereof:

Subfamily Caprinae: the following genera are hardy, prolific, aggressive competitors, innate dispersers and difficult to effectively contain. Due to the potential for competition with native wildlife species and hybridization with native sheep and goats, importation of the following genera is prohibited:

- Rudicapra (chamois) Mountains of C. and S. Europe & Asia Minor. Natural dispersers; capable of clearing 12' fences; potential for habitat competition.

- Hemitragus (tahr) Himalayas, Oman and mtns. of S. India. A mountain species with same niche as the North American mountain goat - potential for habitat competition. Difficult to contain - a notorious jumper.

- Capra (goats and ibexes native to Europe, Asia Minor & Middle East - excluding domestic goats, Capra hircus). Ibex native to European Alps, Afghanistan, N. India & N. Ethiopia. Potential for habitat competition. Difficult to contain: the ibex is a notorious jumper that can clear 12' fences. Markhor goats can jump 8'. In addition to being notorious jumpers, members of the genus Capra are adept climbers. They may scale fences and corner sections where support structures exist. They are hardy, capable of moving long distances, adaptable to a wide range of environments, and survive well in the wild.

- Ammotragus (Barbary sheep or aoudad) Mtns. of Morocco & W. Sahara to Egypt & Sudan. Natural dispersers and difficult to contain (can clear 8' fences). They are very aggressive and prolific (can produce 4 young per year). Potential for habitat competition: out-compete both bighorn sheep and mule deer. In addition to forage competition, they exhibit aggressive behavior and are known to drive deer from bedding sites, exclude other ungulates from water sources and prevent bighorn rams from successfully breeding by herding the ewes. In Col., 76% carry pasteurella. Barbary sheep have also been shown to carry bluetongue, infectious bovine rhinotrachetis and epizootic hemorrhagic disease.

- Ovis (only the mouflon species, Ovis musimon) Corsica, Sardinia & Cyprus. Readily hybridizes with bighorn sheep, producing fertile offspring. Do well in the wild.

Subfamily Hippotraginae: Oryx and Addax are plains animals. Primary concern is potential habitat competition with native species. Disease transmission is also a concern.

- Oryx (oryx and gemsbok) Morocco-Egypt; Arabia, Ethiopia & S. Africa. Very aggressive - even known to kill elk. Feral oryx are a big problem in N. Mexico.
- Addax (addax) W. Sahara, Egypt & Sudan.

Subfamily Reduncinae:

- Redunca (reedbucks) Africa. A short grass grazer. Potential for habitat competition with WT deer and antelope. Females very similar in appearance to female WT deer - to eradicate, have to shoot out WTs as well.

Subfamily Alcelaphnae: Plains species that are carriers of malignant catarrhal fever.

- Connochaetes (wildebeests)
- Alcelaphus (hartebeests)
- Damaliscus (sassabies: blesbok, bontebok, topi)

2) The following species in the family Cervidae (and hybrids thereof), due to the potential for hybridization, transmission of diseases and parasites, and habitat competition/degradation. Hybridization is fairly common among members of the deer family, particularly within the genus Cervus (Harrington 1985, Short 1985, Gray 1972). Exotic species in the genus Cervidae have transmitted exotic parasites to moose in the NE U.S. and to white-tailed deer in Texas. Members of the Cervidae family readily become feral, are difficult or impossible to eradicate once they are free-ranging, and exotic species are characteristically aggressive competitors with native wildlife species:

- moose (Alces alces) Parasite concerns, primarily meningeal worm and liver flukes.

- All Red Deer (Cervus elaphus), and crosses with North American elk (including C. e. canadensis, roosevelti, manitobensis, nannodes, and nelsoni). Red deer and red deer hybrids may be difficult to distinguish from elk, readily become feral, are very aggressive breeders and readily hybridize with North American elk.

- axis deer (Axis axis) India, Nepal, Sri Lanka. Can adapt well to both wet and dry climates and can out-compete WT deer. Known to hybridize with red deer and white-tailed deer.

- Rusa deer (Cervus timorensis) Java, Celebes, Timor, Moluccas & associated islands.

- Sambar deer (Cervus unicolor) India to SE China, Malay Peninsula and associated islands.

- Sika deer (Cervus nippon) SE Siberia, China, Japan, Korea, Manchuria. There are 9 subspecies, the smaller Japanese variety being the most prevalent on game farms in the U.S. Some of the Asian mainland subspecies are larger than the island subspecies, approaching the size of red deer and American elk. Some states (including Texas) consider the sika to be the most difficult exotic species to control once it becomes feral - attempts to eradicate them have been futile. Sika deer are very hardy and when subject to control measures they become very secretive, to the point of becoming nocturnal. Sika deer have been shown to out-compete white-tailed deer and fertile offspring are produced when they are crossed with red deer or elk.

- Roe deer (Capreolus capreolus and C. pygarus) Eurasia. People who have worked with these species believe that feral roe deer, due to their size, behavior and adaptability, would be as difficult as sika deer to eradicate or control.

3) All wild species in the family Suidae (Russian boar, European boar) and hybrids thereof. Concerns include pseudorabies and habitat competition/degradation - including detrimental impacts to ground nesting birds. Feral hogs are a serious problem in California, where they now number well in excess of 100,000.

The U.S. Animal Health Association adopted a resolution in November, 1991 recommending that states that do not currently have feral hogs, consider banning them as 15 states already have. This resolution was prompted by the October 1991 escape of a herd of hogs in Minnesota. Based on experience of other states, they cannot be kept in confinement, are capable of doing enormous damage to vegetation and other wildlife populations (including small mammals and ground nesting birds such as turkeys) and cannot be eliminated once they become established in the wild. There are currently 23 states that do have feral hogs and 27 that do not (including Montana).

4) In the family Tayassuidae, the collared peccary (javelina) (Tayassu tajacu) and hybrids thereof. Same concerns as those itemized for the Suidae family.

The following species have been designated in the new rules as "restricted species", on the basis of specific animal health risks they pose to wildlife and/or domestic livestock:

- white-tailed deer (Odocoileus virginianus). Carrier of meningeal worm. Importation of white-tailed deer into Montana is allowed only for game farms currently licensed for white-tailed deer and which currently possess white-tailed deer. The only white-tailed deer that may be permitted entry are those originating from states west of the 100th meridian (where meningeal worm is not endemic) and which meet specific testing protocol outlined in the rules. This provision allows game farmers currently raising white-tailed deer to obtain breeding stock needed to avoid inbreeding.

- caribou (reindeer) (Rangifer sp.). Due to genetic concerns associated with the MT/ID interstate caribou population and concern about potential transmission of Brucella suis type 4 to native moose, deer and elk populations and humans, importation of reindeer into Montana will be allowed only under the following conditions: 1) all animals in the shipment originate in a herd located south of the Canada/U.S. border that is certified brucellosis-free (both B. suis and B. abortus) and tuberculosis-free, as determined by whole-herd testing, and 2) the destination of these animals is not located west of the continental divide.

  Canadian researchers working with free-ranging reindeer and caribou have recently reported finding blood titers indicative of unidentified herpes viruses. Due to the immunosuppressive effects of such viruses, there is concern about the potential for additional, unknown health risks that reindeer and caribou may pose to wildlife and cattle.

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PERSONAL COMMUNICATIONS:

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APPENDIX D

STATE HISTORIC PRESERVATION OFFICE CORRESPONDENCE

State Historic Preservation Office
Montana Historical Society
Mailing Address: 225 North Roberts • Helena, MT 59620-9990
Office Address: 102 Broadway • Helena, MT • (406) 444-7715

November 17, 1992

NOV 20 1992

Michael Korn
Montana Dept. of Fish, Wildlife & Parks
1420 E. 6th Ave.
Helena, MT 59620

RE: Proposed game farm/shooting preserve - Grizzly Gulch, Lewis & Clark Co.

Dear Michael:

I had hoped to be able to respond to your recent request for information prior to last Thursday's scoping meeting. The cultural resource file search was conducted last week, but once I saw that the results were negative, it seemed slightly less imperative to try to get something in writing to you.

No sites are currently recorded in either S.34 or 35, T10N, R4W. This reflects the fact that no systematic survey work has been conducted in the area in question. Information contained in the materials submitted for our review does mention that a homestead existed on the 120-acre tract proposed for the elk ranch. Such a site lead suggests that a cultural resource inventory would be a productive effort in identifying historic remains and fully evaluating their significance. Judging from the results of nearby surveys done by BLM and USFS cultural resource specialists, other sites types expected in this area would include evidence of mining, historic dumps, and various remnants of activities related to the mining industry.

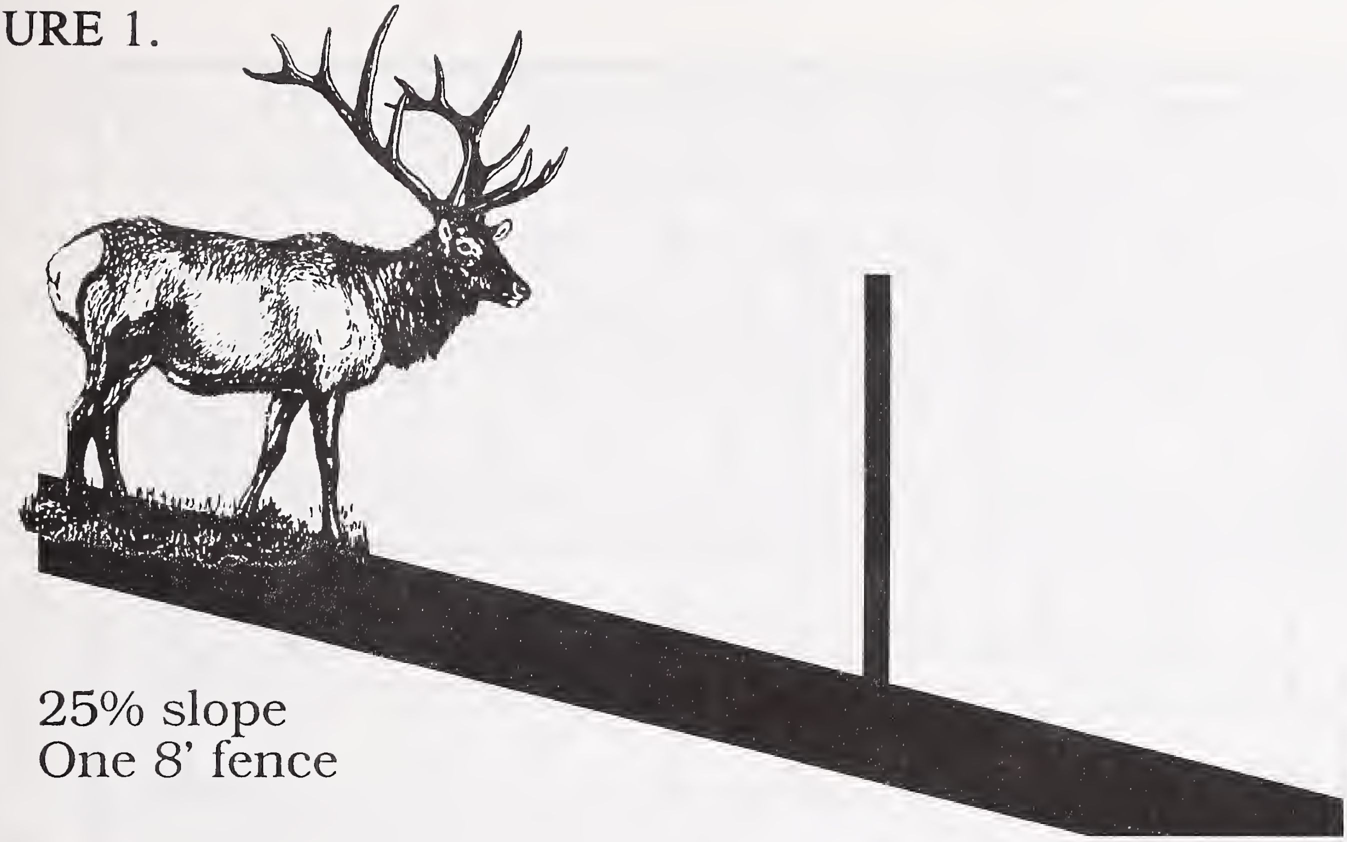
Please call if you have any questions.

Sincerely,

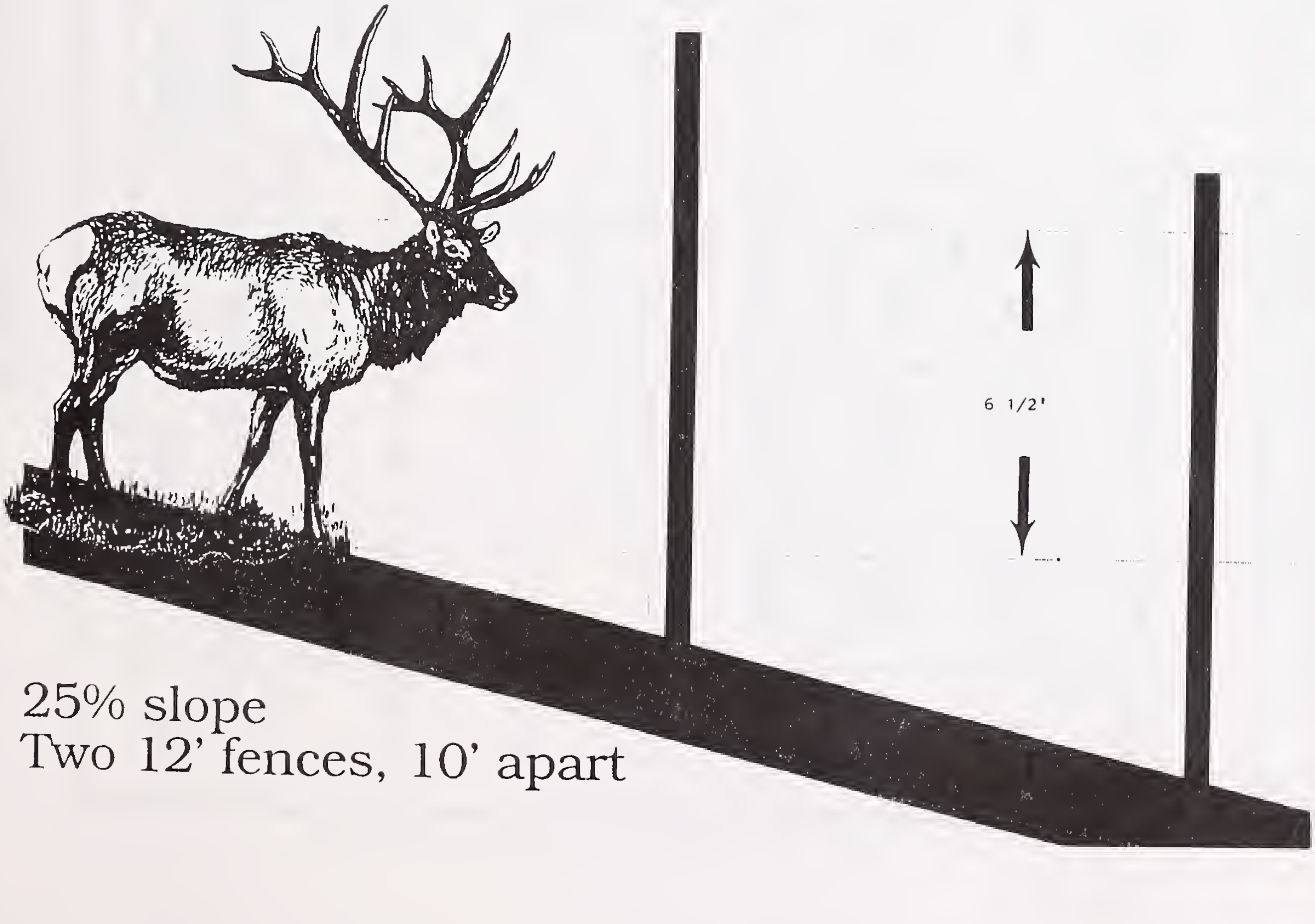
Diana L. Vanek

Diana L. Vanek
Archaeologist

FIGURE 1.



25% slope
One 8' fence



25% slope
Two 12' fences, 10' apart

FIGURE 2. Economics of Deer and Elk Hunting in 8 Hunting Districts in the Helena Area, Based on 1989 Dollars

	DEER						ELK					
HD	NUMBER OF HUNTERS	HUNTER DAYS RES	HUNTER DAYS NR	EXPENDITURES RES [1]	EXPENDITURES NR [2]	NET VALUE [3]	NUMBER OF HUNTERS	HUNTER DAYS RES	HUNTER DAYS NR	EXPENDITURES RES [4]	EXPENDITURES NR [5]	NET VALUE [6]
835	1476	7845 (8049)	204	274,575	19,788	499,038	1332	7849 (8051)	202	353,205	42,622	595,774
818	1141	7822 (7942)	120	273,700	11,640	492,404	1341	8902 (9077)	175	400,590	36,925	671,698
839	1103	5104 (5224)	120	178,640	11,640	323,888	824	4359 (4416)	57	196,155	12,027	326,784
843	1409	7339 (7946)	607	256,865	58,879	492,652	1019	5563 (5891)	328	250,335	69,208	435,934
880	3798	19,141 (20,076)	935	669,935	90,695	1,244,712	3162	16,459 (17,321)	862	740,655	181,882	1,281,754
892	1804	8434 (9036)	602	295,190	58,394	560,232	1085	7164 (7699)	535	322,380	112,885	569,726
215	1469	8087 (8756)	669	283,045	64,893	542,872	2050	12,444 (13,155)	711	559,980	150,021	973,470
293	1834	8706 (9561)	855	304,710	82,935	592,782	2005	10,233 (10,978)	745	460,485	157,195	812,372
TOTAL	14,034	72,478 (76,590)	4112	$2,536,660	$398,864	$4,748,580	12,818	72,973 (76,588)	3615	$3,283,785	$762,765	5,667,512

[1] Resident expenditures for deer hunting = $35/day/person
[2] Non-resident expenditures for deer hunting = $97/day/person
[3] Net value of a day of deer hunting = $62
[4] Resident expenditures for elk hunting = $45/day/person
[5] Non-resident expenditures for elk hunting = $211/day/person
[6] Net value of a day of elk hunting = $74

The annual Net Value of deer hunting in Hunting District 835 to the hunting public is estimated at approximately $0.5 million while the Net Value of elk hunting in Hunting District 835 is slightly more than $0.5 million. Average annual expenditures for both resident and non-resident deer hunters is conservatively estimated at $294,363, while expenditures for elk hunting is approximately $395,827.

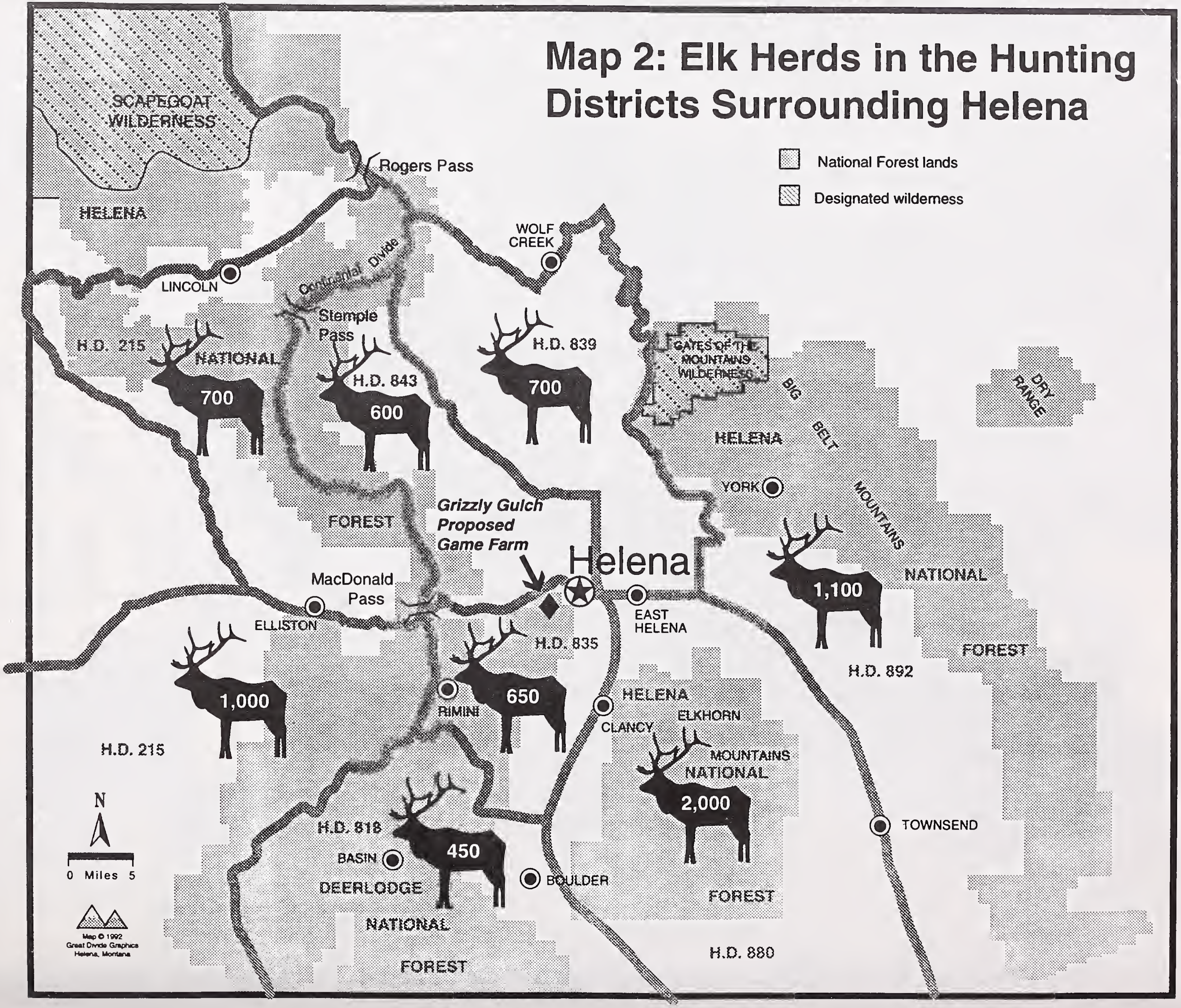
Wildlife do moves between hunting districts, and seasonal home ranges overlap adjacent districts. Therefore, disease, parasites and/or genetic pollution could spread throughout wildlife populations very quickly. The eight hunting districts immediately surrounding Helena were used to estimate the population that may be affected. 7,000 and 10,000 are estimates of elk and deer populations, respectively, in the greater Helena area. Progressive contact is made outward from the center of the analysis area (the proposed site).

The average annual expenditures made by deer hunters in the greater Helena area amounts to about $2,935,524 while those made by elk hunters are approximately $4,046,550. The Net Value of deer hunting in this 8 district area amounts to about $4,748,580 while elk hunting is valued at approximately $5667512.

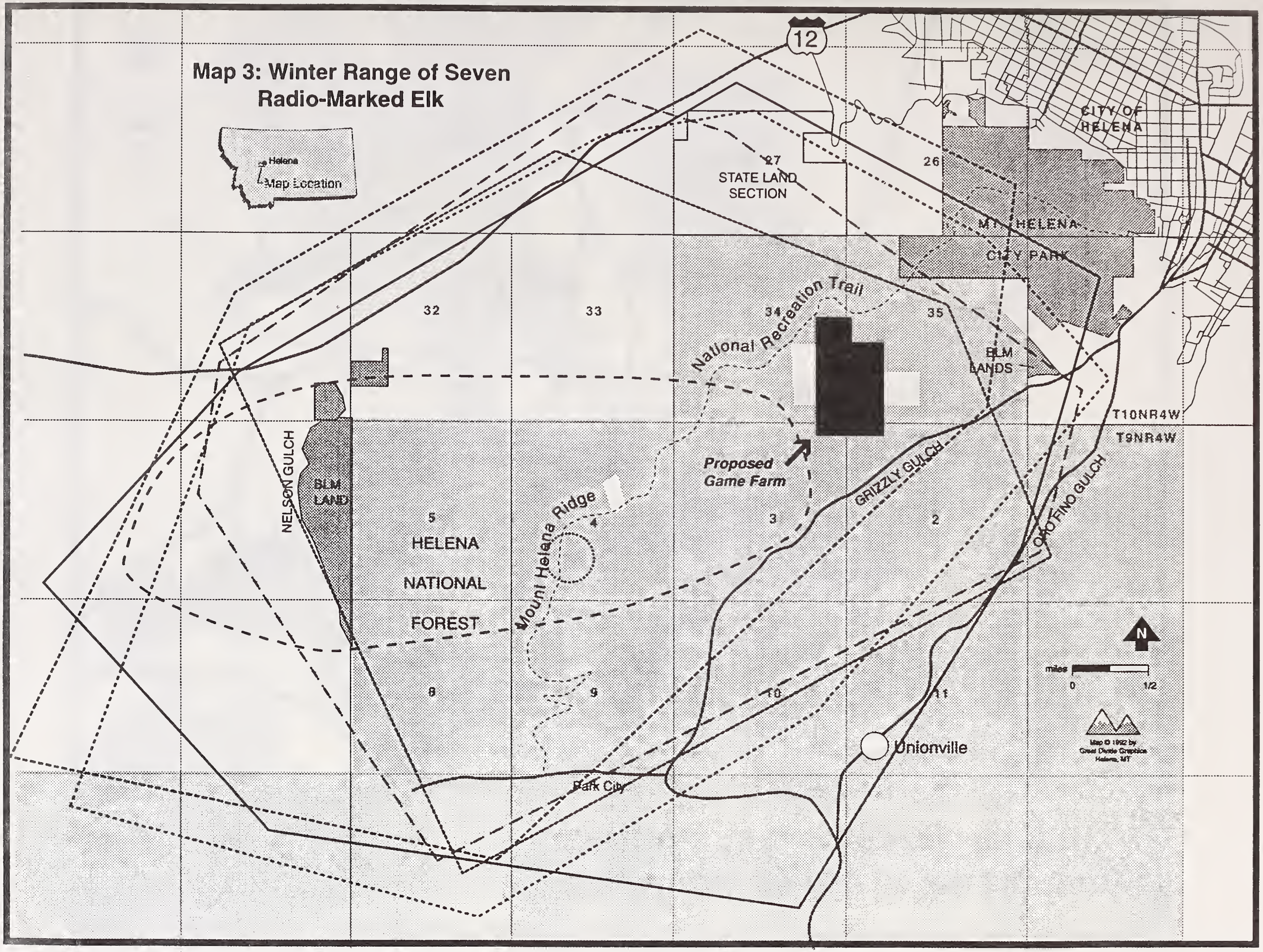
If native elk and deer populations were to contract disease hunters would be discouraged from participating in the sport or if the numbers of wildlife were reduced as a result of control actions to remove hybridized or diseased animals these revenues to the community would most likely be negatively affected.

In addition to these economic values other values also exist that are not addressed here due to lack of time including option existence and bequest values (Brooks 1988).

Map 2: Elk Herds in the Hunting Districts Surrounding Helena

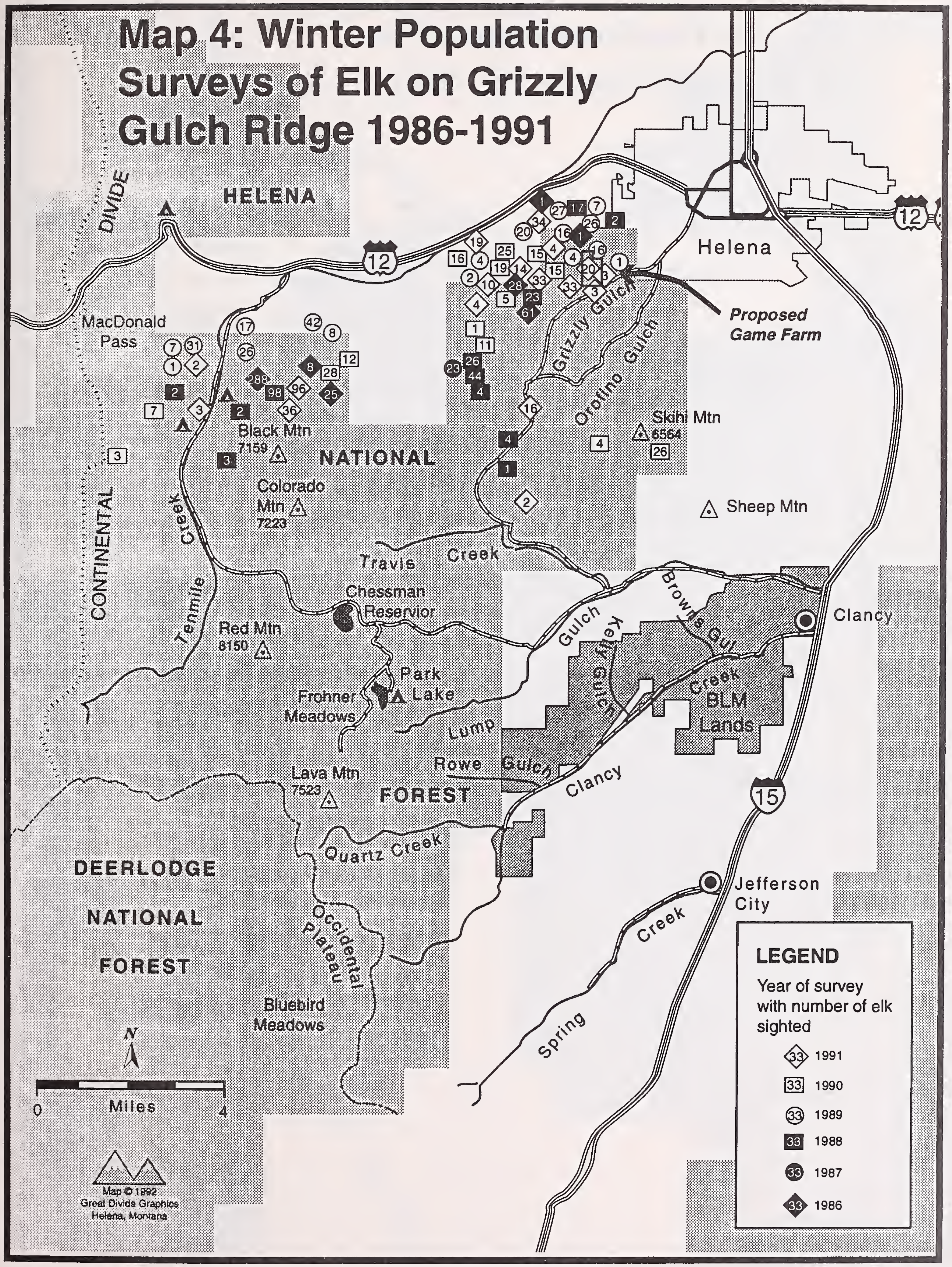


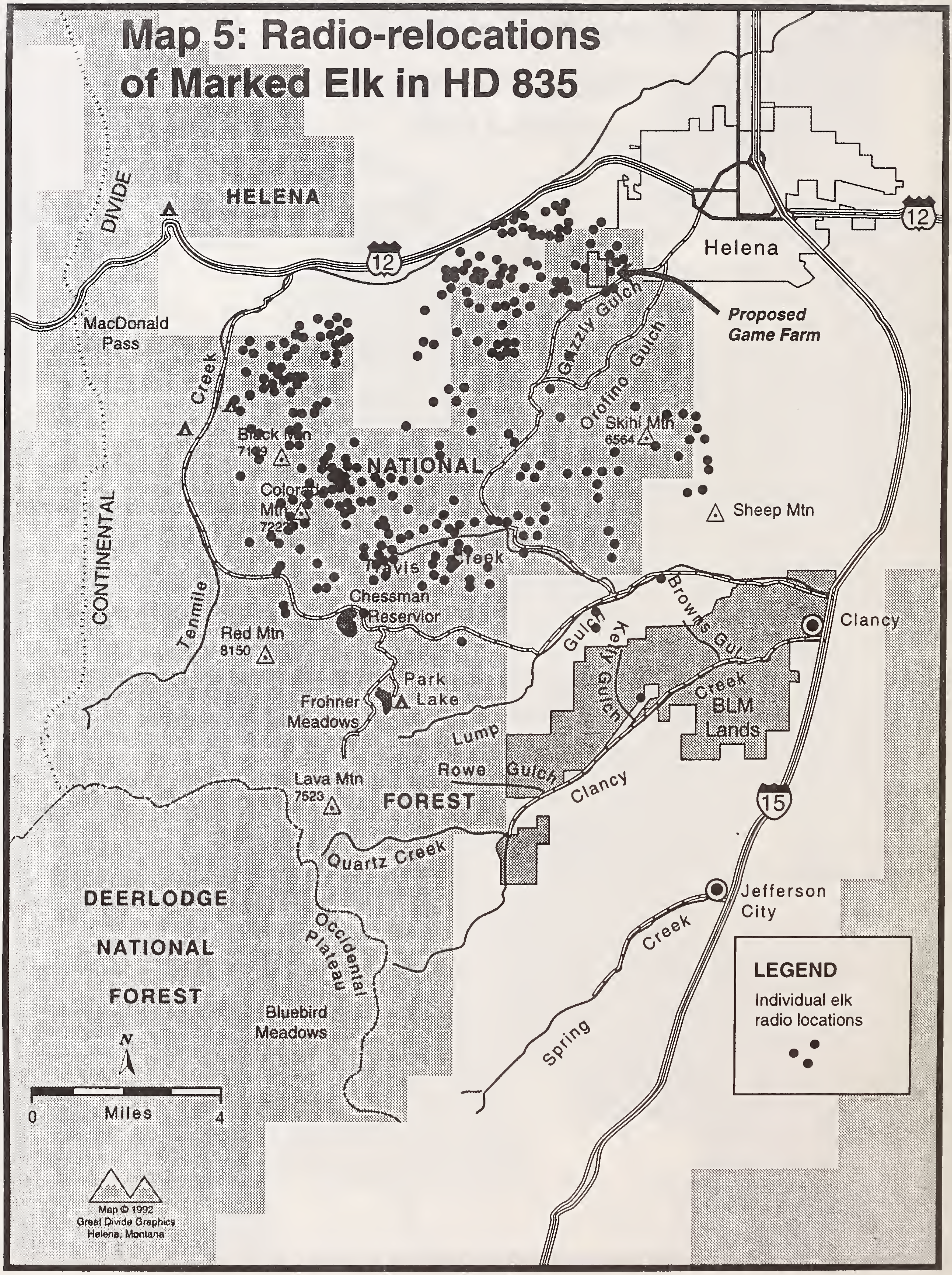
Map 3: Winter Range of Seven Radio-Marked Elk



Map © 1992 by Great Divide Graphics Helena, MT

Map 4: Winter Population Surveys of Elk on Grizzly Gulch Ridge 1986-1991





Map 5: Radio-relocations of Marked Elk in HD 835

Map © 1992
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Helena, Montana